

# MIND

## A QUARTERLY REVIEW OF PSYCHOLOGY AND PHILOSOPHY

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### I.—THE EXPERIMENTAL THEORY OF KNOWLEDGE.

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It should be possible to discern and describe a knowledge as one identifies any object, concern or event. It must have its own marks; it must offer characteristic features—as much so as a thunder-storm, the constitution of a State, or a leopard. In the search for this affair, we are first of all desirous for something which is for itself, contemporaneously with its occurrence, a cognition, not something called knowledge by another and from without—whether this other be logician, psychologist or epistemologist. The 'knowledge' may turn out false, and hence no knowledge; but this is an after-affair; it may prove to be rich in fruitage of wisdom, but if this outcome be only wisdom after the event, it does not concern us. What we want is just something which takes itself as knowledge, rightly or wrongly.

#### I.

This means a specific case, a sample. Yet instances are proverbially dangerous—so naïvely and graciously may they beg the questions at issue. Our recourse is to an example so simple, so much on its face as to be as innocent as may be of assumptions. This we shall gradually complicate, mindful at each step to state just what new elements are introduced.

Let us suppose a smell, just a floating odour. This odour may be anchored by supposing that it moves to action; it

starts changes which end in picking and enjoying a rose. This description is intended to apply to the course of events witnessed and recounted from without. What sort of a course must it be to constitute a knowledge, or to have somewhere within its career that which deserves this title? The smell, *imprimis*, is in consciousness; the movements that it excites are in consciousness; the final plucking and gratification are experienced. But, let us say, the smell is not the smell of the rose; the resulting change of the organism is not a sense of walking and reaching; the delicious finale is not the fulfilment of the movement, and, through that, of the original smell: 'is not,' in each case meaning is 'not experienced as'; is not so directly in consciousness. We may take, in short, these experiences in a brutally serial fashion. The smell, *S*, is replaced (and displaced) by a felt movement, *K*, this is replaced by the gratification, *G*. Viewed from without, as we are now regarding it, there is *S-K-G*. But from within, for itself, it is now *S*, now *K*, now *G*, and so on to the end of the chapter. Nowhere is there looking before and after; memory and anticipation are not born. Such an experience neither is, in whole or in part, a knowledge, nor does it anywhere exercise a cognitive function.

Here, however, we may be halted. If there is anything present in consciousness at all, we may be told (at least we constantly are so told) there must be knowledge of it as present—either in a world of things, or, at all events, in 'consciousness'. There is, so it is argued, knowledge at least of the simple apprehensive type, knowledge of the acquaintance order, knowledge *that* even though not knowledge *what*. The smell, it is admitted, does not know *about* anything else, nor is anything known *about* the smell (the same thing, perhaps); but the smell is known, either by itself, or by the mind, or by some subject, some unwinking, unremitting eye. No, we must reply; there is no apprehension without some (however slight) comprehension; no acquaintance which is not either recognition or expectation. Acquaintance is presence honoured also with an escort; presence is introduced as familiar, or an associate springs up to greet it. Acquaintance always implies a little friendliness; a trace of re-knowing, of anticipatory welcome or dread of the trait to follow.

This claim cannot be dismissed as trivial. If valid, it carries with it the immense distance of being and knowing: and the recognition of an element of mediation, that is, of art, in all knowledge. This disparity, this transcendence, is not something which holds of *our* knowledge, of finite knowledge,

of relative knowledge, just marking the gap between our type of consciousness and some other with which we may contrast it after the manner of the agnostic or the transcendentalist (who hold so much property in joint ownership!), but holds because knowing is knowing, that way of bringing things to bear upon things which we call reflexion—a manipulation of experiences in the light one of another.

"Feeling," I read in a recent article, "feeling is immediately acquainted with its own quality, with its own subjective being."<sup>1</sup> How and whence this duplication in the inwards of feeling into feeling the knower and feeling the known? into feeling as being and feeling as acquaintance? Let us frankly deny such monsters. Feeling is its own quality; is its own *specific* (whence and why, once more, *subjective*?) being. If this be dogmatism, it is at least worth insistent declaration, were it only by way of counter-irritant to that other dogmatism which asserts that being in consciousness is always presence for or in knowledge. So let us repeat once more, that to *be* a smell (or anything else) is one thing, to be *known* as smell, another; to be a 'feeling' one thing, to be *known* as a 'feeling' another.<sup>2</sup> The first is thinghood; being, absolute, indubitable, direct; in this way all things *are* that are in consciousness at all.<sup>3</sup> The second is reflected being, things indicating and calling for other things—something offering the possibility of truth and hence of falsity. The first is genuine immediacy; the second is (in the instance discussed) a pseudo-immediacy, which in the same breath that it proclaims its immediacy smuggles in another term (and one which is unexperienced both in itself

<sup>1</sup> I must remind the reader again of a point already suggested. It is the identification of presence in consciousness with knowledge as such that leads to setting up a mind (*ego*, subject) which has the peculiar property of knowing (only so often it knows wrong!), or else that leads to supplying 'sensations' with the peculiar property of surveying their own entrails. Given the correct feeling that knowledge involves relationship, there being, by supposition, no other *thing* to which the thing in consciousness is related, it is forthwith related to a soul substance, or to its ghostly offspring, a 'subject,' or to 'consciousness' itself.

<sup>2</sup> Let us further recall that this theory requires either that things present shall be already psychical things (feelings, sensations, etc.), in order to be assimilated to the knowing mind, subject to consciousness; or else translates genuinely naïve realism into the miracle of a mind which gets outside itself to lay its ghostly hands upon the things of an external world.

<sup>3</sup> This means that things may be present *as* known, just as they be present as hard or soft, agreeable or disgusting, hoped for or dreaded. The Mediacy, or the art of intervention, which characterises knowledge, indicates precisely the way in which known things as known are present.

and in its relation) the subject, or consciousness, to which to relate the immediate.<sup>1</sup>

But we need not remain with dogmatic assertions. To be acquainted with a thing or with a person has a definite empirical meaning; we have only to call to mind what it is to be genuinely and empirically acquainted, to have done for ever with this uncanny presence which, though bare and simple presence, is yet known, and thus is clothed upon and complicated. [To be acquainted with a thing is to be assured (from the standpoint of the experience itself) that it is of such and such a character; that it will behave, if given an opportunity, in such and such way;] that the obviously and flagrantly present trait is associated with fellow traits which will show themselves, if the leadings of the present trait are followed out. To be acquainted is to some extent, on the basis of prior experience, to anticipate. I am, say, barely acquainted with Mr. Smith: then I have no extended body of associated qualities along with those palpably present, but at least some one suggested trait occurs; his nose, his tone of voice, the place where I saw him, his calling in life, an interesting anecdote about him, etc. [To be acquainted is to know what a thing is *like* in some particular.] If one is acquainted with the smell of a flower it means that the smell is not just smell, but reminds one of some other experienced thing which stands in continuity with the smell. There is thus supplied a condition of control of or purchase upon what is present, the possibility of translating it into terms of some other trait not now sensibly present.

Let us return to our example. Let us suppose that *S* is not just displaced by *K* and then by *G*. Let us suppose it persists; and persists not as an unchanged *S* alongside *K* and *G*, nor yet as fused with them into a new further quale *J*. For in such events, we have only the type already considered and rejected. The new quale might be for an observer more complex, or fuller of meaning, than the original *S*, *K* or *G*, but might not be experienced *as* complex. We might thus suppose a composite photograph which would suggest

<sup>1</sup> If Hume had had a tithe of the interest in the mode and operation of the *flux* of perceptions (that he carelessly proclaimed and then abandoned as a merely negative thing, useful to drown dogmatists in), which he had in distinct and isolated existences, he might have saved us both from German *Erkenntnisstheorie*, and from that modern miracle play, the psychology of elements of consciousness, which under the ægis of science, does not hesitate to have psychical elements compound and breed, and in their agile intangibility put to shame the performances of their less acrobatic cousins, physical atoms.



nothing of the complexity of its origin and structure. In this case we should have simply another picture.

But we may also suppose that the blur of the photograph suggests the superimposition of others and something of their character. Then we get another, and for our problem, much more fruitful kind of persistence. We will imagine that the final *G* assumes this form: Gratification terminating movement induced by smell. The smell is still present; it has persisted. It is not present in its original form, but is represented with a quality, an office, that of having excited activity and thereby terminated its career, in a certain quale of gratification. It is not *S*, but  $\Sigma$ ; that is *S* with an increment of meaning due to maintenance and fulfilment through a process. *S* is no longer just smell, but smell which has excited and thereby secured.

Here we have a cognitive, but not a cognitional thing. In saying that the smell is finally experienced as *meaning* gratification (through intervening handling, seeing, etc.) and meaning it not in a hapless way, but in a fashion which operates to effect what is meant, we retrospectively attribute intellectual force and function to the smell—and this is what is signified by 'cognitive'. Yet the smell is not cognitional, because it did not knowingly intend to mean this; but is found, after the event, to have meant it. Nor again is the final experience, the  $\Sigma$  or transformed *S*, a knowledge.

Here again the statement may be challenged. Those who agree with the denial that bare presence of a quale in consciousness constitutes acquaintance and simple apprehension, may now turn against us, saying that experience of fulfilment of meaning is just what we mean by knowledge, and this is just what the  $\Sigma$  of our illustration is. The point is fundamental. As the smell at first was presence or being, less than knowing, so the fulfilment is an experience which is more than knowing. Seeing and handling the flower, enjoying the full meaning of the smell as the odour of just this beautiful thing is not knowledge because it is more than knowledge.

As this may seem dogmatic, let us suppose that the fulfilment, the realisation, experience, is a knowledge. Then how shall it be distinguished from and yet classed with other things called knowledge, *viz.*, reflective, discursive cognitions? Such knowledges are what they are precisely because they are not fulfilments, but intentions, aims, schemes, symbols of overt fulfilment. Knowledge, perceptual and conceptual, of a hunting dog is prerequisite in order that I may really hunt with the hounds. The hunting in turn may increase

my knowledge of dogs and their ways. But the knowledge of the dog, *qua* knowledge, remains characteristically marked off from the use of that knowledge in the fulfilment experience, the hunt. The hunt is a *realisation* of knowledge; it alone, if you please, verifies, validates, knowledge, or supplies tests of truth. The prior knowledge of the dog, was, if you wish, hypothetical, lacking in assurance, in categorical certainty. The hunting, the fulfilling, realising experience alone *gives* knowledge, because it alone completely assures; makes faith good in works.

Now there is and can be no objection to this definition of knowledge, *provided it is consistently adhered to*. One has as much right to identify knowledge with complete assurance, as I have to identify it with anything else. Considerable justification in the common use of language, in common sense, may be found for defining knowledge as complete assurance. But even upon this definition, the fulfilling experience is not, as such, complete assurance, and hence not a knowledge. Assurance, cognitive validation, and guarantee, follow from it, but are not coincident with its occurrence. It *gives*, but is not, assurance. The concrete construction of a story, the manipulation of a machine, the hunting with the dogs, is not, so far as it is fulfilment, a confirmation of meanings previously entertained as cognitional; that is, is not contemporaneously experienced as such. To think of prior schemes, symbols, meanings, as fulfilled in a subsequent experience, is reflectively to present to oneself in their relations to one another both the meanings and the experiences in which they are, as a matter of fact, embodied. This reflective attitude cannot be identical with the fulfilment experience itself. It occurs only in retrospect when the worth of the meanings, the cognitive ideas, is critically inspected in the light of their fulfilment. Or it occurs as an interruption of the fulfilling experience. The hunter stops his hunting consciousness as a fulfilment to reflect that he made a mistake in his idea of his dog, or again, that his dog is everything he thought he was—that his notion of him is confirmed. Or, the man stops the actual construction of his machine and turns back upon his plan in correction or in admiring estimate of its value. *The fulfilling experience is not of itself knowledge*, then, even if we identify knowledge with fulness of assurance or guarantee. Moreover it gives, affords, assurance only in reference to a situation which we have not yet considered.<sup>1</sup>

<sup>1</sup> In other words, the situation as described is not to be confused with the case of hunting on purpose to test an idea regarding the dog.

In other words, before there can properly be use of the idea of confirmation or refutation, there must be something which *means* to mean something and which therefore can be guaranteed or nullified by the issue—and this is precisely what we have not as yet found. We must return to our instance and introduce a further complication. Let us suppose that the smell quale recurs at a later date, and that it recurs neither as the original *S* nor yet as the final  $\Sigma$ , but as an *S* which is fated or charged with the sense of the possibility of a fulfilment like unto  $\Sigma$ . The *S'* which recurs is aware of something else which it means, which it intends to effect through an operation which it incites and without which its own presence is abortive, and, so to say, unjustified, senseless. [Now we have an experience which is *cognitional*, not merely cognitive; which is contemporaneously aware of meaning something beyond itself, instead of having this meaning ascribed by another or at a later period.] *The odour knows the rose; the rose is known by the odour; and the import of each term is constituted by the relationship in which it stands to the other.* That is, the import of the smell is the intentionally indicating and demanding relation which it sustains to the enjoyment of the rose as its fulfilling experience; while this enjoyment is just the content or definition of what the smell consciously meant, *i.e.*, meant to mean.

The spectator or critic may decide that the smell is a feeling or state of consciousness or idea—but in this case he is talking about smell in a different context, another thing, having another meaning in another situation—his own cognitive problem as psychologist or whatever. But for itself the smell is a definite thing or quale which identifies itself with its intention—securing another thing as its own fulfilment. And the enjoyed rose is not that of the artist or the botanist—it is not the object of some other intention and problem, but is precisely the qualities meant or intended by this particular smell. *Subsequent* fulfilment may increase this content, so that the object or content of the rose as known will be other and fuller next time and so on. But we have no right to set up 'a rose' at large or in general as the object of the knowing odour; [the object of knowledge is always strictly correlative to that particular thing which means it.] It is not something which can be put in a wholesale way over against that which cognitively refers to it, as when the epistemologist puts the 'real' rose (object) over against the merely phenomenal or empirical rose which *this* smell happens to mean. As the meaning gets more complex, fuller, more finely discriminated, the object which realises or fulfils the

meaning grows similarly in quality. But we cannot set up a rose, an object of fullest, complete and exhaustive content as that which is really meant by any and every odour of a rose, whether it consciously meant to mean it or not. The test of the cognitional rectitude of the odour lies in the *specific* object which it sets out to secure. This is the meaning of the statement that the import of *each* term is found in its relationship to other. It applies to object meant as well as to the meaning. Fulfilment, completion are always relative terms. [Hence the criterion of the truth or falsity of the meaning, of the adequacy, of the cognitional thing lies within the relationships of the situation and not without.] The thing that means another by means of an intervening operation either succeeds or fails in accomplishing the operation indicated, while this operation either gives or fails to give the object meant. Hence the truth or falsity of the original cognitional object.

Let us return to the situation in which a smell is experienced to mean a certain fulfilment through an operation. Both the thing meaning and the thing meant are elements in the same situation. Both are present, but both are not present in the same way. In fact, one is present as-not-present-in-the-same-way-in-which-the-other-is. It is present as something to be rendered present in the same way through the intervention of an operation. We must not balk at a purely verbal difficulty. It suggests a verbal inconsistency to speak of a thing present-as-absent. But all ideal contents, all aims (that is things aimed at) are present in just such fashion. Things can be presented as absent, just as they can be presented as hard or soft, black or white, six inches or fifty rods away from the body. The assumption that an ideal content must be either totally absent, or else present in just the same fashion as it will be when it is realised, is not only dogmatic, but self-contradictory. The only way in which an ideal content can be experienced at all is to be presented as not-present-in-the-same-way in which something else is present, the latter kind of presence affording the standard or type of satisfactory presence. When present in the same way it ceases to be an ideal content. Not a contrast of bare existence over against non-existence, or of present consciousness over against reality out of present consciousness, but of a satisfactory with an unsatisfactory mode of presence makes the difference between the 'really' and the 'ideally' present.

In terms of our illustration, handling and enjoying the rose is presented, but it is not present in the same way that the smell is present. It is presented as *going* to be there in

the same way, through an operation which the smell stands sponsor for. The situation is inherently an uneasy one—one in which everything hangs upon the performance of the operation indicated; the adequacy of movement as a connecting link, or real adjustment of the thing meaning and the thing meant. Generalising from the instance, we get the following definition: An experience is a knowledge, if in its quale there is an experienced distinction and connexion of two elements of the following sort: *one means or intends the presence of the other in the same fashion in which itself is already present, while the other is that which, while not present in the same fashion, must become so present if the meaning or intention of its companion or yoke-fellow is to be fulfilled through an operation it sets up.*

## II.

We shall now return briefly to the question of knowledge as acquaintance, and at greater length to that of knowledge as assurance, or as fulfilment which confirms and validates. With the recurrence of the odour as meaning something beyond itself, there is apprehension, knowledge *that*. One may now say I know what a *rose* smells like; or I know what *this* smell is like; I am acquainted with the rose's agreeable odour. In short, on the basis of a present quality, the odour anticipates and forestalls some further trait.

We have also the conditions of knowledge of the confirmation and refutation type. In the working out of the situation just described, in the transformation, self-indicated and self-demanded, of the tensional into a harmonious or satisfactory situation, fulfilment or disappointment results. The odour either does or does not fulfil itself in the rose. The smell as intention is borne out by the facts, or is nullified. As has been already pointed out, the subsequent experience of the fulfilment type is not primarily a confirmation or refutation. Its import is too vital, too urgent to be reduced *in itself* just to the value of testing an intention or meaning.<sup>1</sup> But it gets *in reflexion* just such verificatory significance. If

<sup>1</sup> Dr. Moore, in an essay in *Contributions to Logical Theory* has brought out clearly, on the basis of a criticism of the theory of meaning and fulfilment advanced in Royce's *World and Individual*, the full consequences of this distinction. I quote one sentence (p. 350): "Surely there is a pretty discernible difference between experience as a purposive idea, and the experience which fulfils this purpose. To call them both 'ideas' is at least confusing." The text above simply adds that there is also a discernible and important difference between experiences which, *de facto*, are purposing and fulfilling (that is, are seen to be such *ab extra*), and those which are meant to be such, and are found to be what was meant.

the smell's intention is unfulfilled, the discrepancy may throw one back, in reflexion, upon the original situation. Interesting developments then occur. The smell meant a rose; and yet it did not (so it turns out) mean a rose; it meant another flower, or something, one can't just tell what. Clearly there is *something else* which enters in; something else beyond the odour as it was first experienced determined the validity of its meaning. Here then, perhaps, we have a transcendental, as distinct from an experimental reference? *Only if this something else makes no difference, or no detectable difference in the smell itself.* If the utmost observation and reflexion can find no difference in the smell quales which fail and those which succeed in executing their intentions, then there is an outside controlling and disturbing factor, which since it is outside of the situation, can never be utilised in knowledge; and hence can never be employed in any concrete testing or verifying. In this case, knowing depends upon an extra-experimental or transcendental factor. But this very transcendental quality makes both confirmation and refutation, correction, criticism, of the pretensions or meanings of things, impossible. For the conceptions of truth and error, we must, upon the transcendental basis, substitute those of *de facto* success or failure. Sometimes the intention chances upon one, sometimes upon another. Why or how, the gods only know—and they only if to them the extra-experimental factor is not extra-experimental, but makes a concrete difference in the concrete smell. But fortunately the situation is not one to be thus described. The factor which determines control of intention as to its success or failure, does institute a difference in the thing which means the object, and this difference is detectable, once attention, through failure, has been called to the need of its discovery. At the very least, it makes this difference: the smell is infected with an element of uncertainty of meaning—and this as a part of the thing experienced, not for an observer. This additional *awareness* will at least bring about an additional *wariness*. Meaning is more critical, and operation more cautious.

But we need not stop here. Attention may be fully directed to the subject of smells. Smells may become the object of knowledge. They may take, *pro tempore*,<sup>1</sup> the place

<sup>1</sup> The association of science and philosophy with leisure, with a certain economic surplus is not accidental. It is practically worth while to postpone practice; to substitute theorising, to develop a new and fascinating mode of practice. But it is the excess achievement of practice which makes this postponement and substitution possible.

which the rose formerly occupied. By reason of disappointment, the person may turn epistemologist. He may then take the discrepancy, the failure of the smell to execute its own intended meaning, as a wholesale, rather than as a specific fact: as evidence of a contrast in general between things meaning and things meant, instead of as evidence of the need of a more cautious and thorough inspection of odours and execution of operations indicated by them. One may then say: Woe is me; smells are only *my* smells, subjective states existing in an order of being made out of consciousness, while roses exist in another order made out of a radically different sort of stuff; or odours are made out of 'finite' consciousness as their stuff, while the real things, the objects which fulfil them, are made out of an 'infinite' consciousness as their material. Hence some purely metaphysical tie has to be called in to bring them into connexion with each other. And yet this tie does not concern knowledge; it does not make the meaning of one odour any more correct than that of another, nor enable us to discriminate relative degrees of correctness. As a principle of control, this transcendental connexion is related to all alike, and hence condemns and justifies all alike.<sup>1</sup>

It is interesting to note that the transcendentalist almost invariably first falls into the psychological fallacy; and then having himself taken the psychologist's attitude accuses the empiricist whom he criticises of having confused mere psychological existence with logical validity. That is, he begins by supposing that the smell of our illustration (and all the cognitional objects for which this is used as a symbol) is a purely mental or psychical state, so that the question of logical reference or intention is the problem of how the

<sup>1</sup> The belief in the *metaphysical* transcendence of the object of knowledge seems to have its real origin in an *empirical* transcendence of a very specific and describable sort. The thing meaning is one thing; the thing meant is another thing, and is (as already pointed out) a thing presented as not given in the same way as is the thing which means. It is something to be so given. No amount of careful and thorough inspection of the indicating and signifying things can remove or annihilate this gap. The *probability* of correct meaning may be increased in varying degrees—and this is what we mean by control. But absolute certitude can never be reached except experimentally—except by performing the operations indicated and discovering whether or no the intended meaning is fulfilled in *propria persona*. In this experimental sense, truth or the object of any given meaning is always beyond or outside of the cognitional thing which means it. Error as well as truth is a function of knowing. But the non-empirical account of this transcendental (or beyond) relationship puts *all* the error in one place (*our* knowledge), and *all* the truth in another (absolute consciousness or else a thing-in-itself).



merely mental can 'know' the extra-mental. But from a strictly empirical point of view, the smell which knows is no more merely mental than is the rose known. We may, if we please, say that the smell when involving conscious meaning or intention is 'mental,' but this term 'mental' does not denote some separate type of existence—existence as a state of consciousness. It denotes only the fact that the smell, a real and non-psychical object, now exercises an intellectual function. This is, as James has pointed out, an *additive* relation—a new property possessed by an non-mental object, when that object, occurring in a new context, assumes a further office and use.<sup>1</sup> Will not some one who believes that the knowing experience is *aborigine* a strictly "mental" thing, explain how, as matter of fact, it does get a specific, extra-mental reference, capable of being tested, confirmed or refuted? Or, if he believes that this way of viewing it as merely mental, does not express its own experienced quality, but only the form it takes for psychological analysis, will he not explain why he so persistently attributes the inherently "mental" characterisation of it to the empiricist whom he criticises? An object *becomes* meaning when used empirically in a certain way; and, under certain circumstances, the exact character and worth of this meaning *becomes* an object of solicitude. But the transcendental epistemologist with his purely psychical "meanings" and his purely extra-empirical "truths" appears to assume a *Deus ex Machina* whose mechanism is preserved a secret.

Observing the futility of such a method, one may turn scientist, and then epistemologist only as logician, only, that is, as reflecting upon the nature and implications of the scientific process. One might, that is, observe the cases in which odours mean other things than just roses, might voluntarily produce new cases for the sake of further inspection, and thus come to account for the cases where meanings had been falsified in the issue; to discriminate more carefully the peculiarities of those meanings which the event verified, and thus to safeguard and bulwark to some extent the employ of similar meanings in the future. The presupposition here is clearly that odour, person and rose are elements in one and the same real world (or, what is the same thing, of the constitution of one object), and that accordingly specific and

<sup>1</sup> "Does 'Consciousness' Exist?" *The Journal of Philosophy, Psychology and Scientific Methods*, vol. i., p. 480. The whole article should be consulted. It has, of course, attracted much attention; but its full logical bearing, in cutting under the charge of psychologism as mere subjectivism, does not seem to me to have been appreciated as yet.

determinable relations exist among the elements. The smell will present itself indifferently as a condition of the organism or as a trait of some other object, the rose; or, in exceptional cases, to be referred exclusively to the organism, as initiator of the operations indicated by the odour and terminated in the rose, while as defining the goal of operations and fulfilment of meaning it is a property of the object. To smells as themselves objects of cognition, many other traits and relations similarly attach themselves—all having reference, sooner or later, to the more effective and judicious use of odours as cognitively significant of other things.

In this reflective determination of things with reference to their specifically meaning other things, experiences of fulfilment, disappointment and going astray inevitably play an important and recurrent rôle. They also are realistic facts, related in realistic ways to the things that intend to mean other things and to the things intended. When these fulfilments and refusals are reflected upon in the determinate relations in which they stand to their relevant meanings, they obtain a quality which is quite lacking to them in their immediate occurrence as just fulfilments or disappointments; viz., the property of affording assurance and correction—of confirming and refuting. Truth and falsity are not properties of any experience or thing, in and of itself or in its first intention; *but of things where the problem of assurance consciously enters in.* Truth and falsity present themselves as significant facts only in situations in which specific meanings and their already experienced fulfilments and non-fulfilments are intentionally compared and contrasted with reference to the question of the worth, as to reliability of meaning, of the given meaning or class of meanings. Like knowledge itself, truth is an experienced relation of characteristic quality of things, and it has no meaning outside of such relation, any more than such adjectives as comfortable applied to a lodging, correct applied to speech, persuasive applied to an orator, etc., have worth apart from the *specific* things to which they are applied. It would be a great gain for logic and epistemology, if we would always translate the noun 'truth' back into the adjective 'true,' and this back into the adverb 'truly'.<sup>1</sup>

So far as this type of reflexion supervenes, we have know-

<sup>1</sup> It is the failure to grasp the coupling of truth of meaning with a specific promise, undertaking or intention expressed by a cognitional thing which underlies, so far as I can see, the criticisms passed upon the experimental or pragmatic view of truth. It is the same failure which is responsible for the wholly *at large* view of truth which characterises the absolutists.

ledge of the critical or scientific type. We have things which claim to mean other experiences; in which the trait of meaning other objects is not discovered *ab extra*, and after the event, but is part of the thing itself. This trait of the thing is as realistic, as specific, as any other of its traits. It is, therefore, as open to inspection and determination as to its nature, as is any other trait. Moreover, since it is upon this trait that assurance (as distinct from accident) of fulfilment depends, an especial interest, an absorbing interest, attaches to its determination. Hence the scientific type of knowledge and its growing domination over other sorts.

We employ meanings in all intentional constructions of experience—in all anticipations, whether artistic, utilitarian or technological, social or moral. The success of the anticipation is found to depend upon the character of the meaning. Hence the stress upon a right determination of these meanings. Since they are the instruments upon which fulfilment depends *so far as that is controlled* or other than accidental, they become themselves objects of surpassing interest. For all persons at some times, and for one class of persons (scientists) at almost all times, the determination of the meanings employed in the control of fulfilments (of acting upon meanings) is central. The experimental or pragmatic theory of knowledge explains the dominating importance of science; it does not depreciate it or explain it away.

Possibly pragmatic writers are to blame for the tendency of their critics to assume that the practice they have in mind is utilitarian in some narrow sense, referring to some pre-conceived and inferior use—though I cannot recall any evidence for this admission. But what the pragmatic theory has in mind is precisely the fact that all the affairs of life which need regulation—all values of all types—depend upon utilisations of meanings. Action is not to be limited to anything less than the carrying out of ideas, than the execution whether strenuous or easeful, of meanings. Hence the surpassing importance which comes to attach to the careful, impartial construction of the meanings, and their constant survey and resurvey with reference to their value as evidenced by experiences of fulfilment and deviation.

That truth means *truths*, that is, specific verifications, combinations of meanings and outcomes reflectively viewed, is one may say the central point of the experimental theory. Truth, in general or in the abstract, is a just name for an experienced relation among the things of experience: that sort of relation in which intents are retrospectively viewed from the standpoint of the fulfilment which they secure

through their own natural operation or incitement. Thus the experimental theory explains directly and simply the absolutistic tendency to translate concrete true things into the general relationship, Truth, and then to hypostatise this abstraction into identity with real being, Truth *per se* and *in se*, to which all transitory things and events—that is, all experienced realities—are only shadowy futile approximations. This type of relationship is central for man's will, for man's conscious endeavour. To select, to conserve, to extend, to propagate those meanings which the course of events has confirmed, to note their peculiarities, to be in advance on the alert to note them, anxiously to search for them to substitute them for meanings which eat up our energy in vain, defines the aim of all our rational effort and the goal of all legitimate ambition. The absolutistic theory is the transfer of this moral or voluntary law of selective action into a quasi-physical (that is, metaphysical) law of indiscriminate being. Identify metaphysical being with adequately *significant excellent* being—that is, with those relationships of things which, in our moments of deepest insight and largest survey, we would continue and reproduce—and the experimentalist, rather than the absolutist, is he who has a right to proclaim the supremacy of Truth, and the superiority of the life devoted to Truth for its own sake. But to read back into the order of things which exists without participation of our reflexion and aim, the quality which defines the purpose of our thought and endeavour is at one and the same stroke to mythologise reality and deprive the life of thoughtful endeavour of its reason for being.

## II.—THE NEW REALISM AND THE OLD IDEALISM.<sup>1</sup>

BY J. S. MACKENZIE.

THE title of this paper is somewhat ambiguous, since the term 'Realism' is commonly used in two quite distinct senses—as the antithesis of Idealism and as the antithesis of Nominalism. It happens, however, that the recent movement of thought that I have now in mind has a tendency to be realistic in both senses of the word. The writers to whom I refer treat all the objects that come before our consciousness—all 'ideas' in the wide Lockean sense of the term—as containing or having a reality independent of the consciousness to which they are presented; and among these ideas those that Locke calls 'abstract general ideas' are included. In fact, the school of thought to which I refer is the direct antithesis of that of Berkeley, with regard both to his subjectivism and to his nominalism.<sup>2</sup> The only important point on which it agrees with Berkeley is in the contention that the Lockean distinction between primary and secondary qualities cannot be maintained as ultimate. Before proceeding to consider this point of view more particularly, it may be well to make some general remarks on the significance of the movement that it represents.

A generation ago the tendency was for all serious specula-

<sup>1</sup> An address to Philosophical Societies at Cardiff, Birmingham and Glasgow. I have thought it best to leave this paper in the form of a lecture, as it does not claim to be a systematic discussion, but only a suggestion of points for consideration.

<sup>2</sup> This may seem to be contradicted by the fact that some of the leading supporters of the new Realism (especially Mr. Moore and Mr. Russell) connect it with an extremely nominalistic type of Logic, like that of Antisthenes. This Logic, however, seems to be quite capable of recognising types such as those of Plato. What it really excludes is not the Platonic theory of Ideas, but only that particular aspect of it which is expressed by the term *κοινωνία*. With this logical aspect of the new Realism I do not deal in the present paper. For a somewhat searching discussion of it, I may refer to the very valuable little book by Mr. H. H. Joachim on *The Nature of Truth*, chap. ii.

tive philosophy in this country to be, in a broad sense, idealistic, or at least—as Sidgwick would have preferred to call it—“mentalistic”. It was only a question between a sensationalist and an intellectualist form of Idealism. The discussion turned on the distinction between Nominalism and Conceptualism—or, as Dr. Bosanquet very happily put it, on the true theory of Identity. Against this there was hardly anything to be set but the somewhat crude materialism that was generally supposed to be—and sometimes actually was—characteristic of the students of the natural sciences, and the still cruder spiritualism that was associated with popular religion. One very unfortunate result of this state of affairs was to create a general appearance of antagonism between the students of natural science and the students of philosophy, except so far as Agnosticism supplied them with a *via media*—a reconciliation through mutual confession of ignorance with regard to the nature of ultimate reality, a confession which some conceived as giving satisfaction to religion as well.

Recently, however, the whole situation has been considerably altered. The students of the physical sciences have to a large extent changed their attitude. They are more willing than formerly to recognise the limitations of their modes of explanation; and some of the most distinguished of them, such as Sir Oliver Lodge and Principal Lloyd Morgan—representing respectively the purely physical and the biological sciences—are showing a disposition to accept idealistic interpretations as more ultimate than those that are provided by the special sciences themselves.<sup>1</sup> On the whole, therefore, the exponents of the natural sciences are not to be reckoned among the enemies of idealism; and it can hardly be said that, among present scientific thinkers, there is any serious supporter of a purely materialistic explanation of the universe. Materialistic interpretations are at any rate practically always rounded off with a confession of ultimate ignorance and mystery,—i.e., they are little more than a form of scepticism. Idealism might thus appear to have a free field for its interpretations; and, as the old antagonism between poetry and philosophy, of which Plato speaks, has long since been forgotten, and the newer one between philosophy and religion is beginning to disappear, it might almost be thought that idealism had become completely triumphant, and that a universal harmony had

<sup>1</sup> Perhaps I ought to add that I do not here express or imply any opinion as to the value of the particular ways in which such interpretations have been put forward or suggested.

been attained. But in recent years this harmony has been rudely disturbed by two new antagonists, more formidable than many of those that went before them—Pragmatism, on the one hand, and a new type of Realism, on the other.

The former of these has been distinctly the more noisy, and has attracted the larger share of attention; but the latter is perhaps intrinsically the more interesting and important and is gradually making its way to the front. The one takes up a more purely subjective attitude than that of idealism, and indeed opposes a pure subjectivism against all attempts at an objective construction. The other is more objective than idealism, and opposes an adamant rock of objectivity against all attempts at idealistic interpretation. Pragmatism says—to put it broadly—that our world is what we arbitrarily make it for ourselves. It is a variant on the *homo mensura* of Protagoras, a new form of scepticism, differing from the old through its being based on a recognition of the volitional character of the human consciousness, rather than on a recognition of its sensational character. The new Realism, on the other hand, maintains that our world is simply made for us and presented to us—that it is not a construction, but a datum. Both views seem to me, I may as well say at once, to err—the one by not sufficiently recognising the objective conditions of human choice, the other by over-emphasising the objective conditions to which we are subject. But it is only with one of these points that I am directly concerned in the present paper.

Pragmatism has been a good deal discussed within the last year or two; and, though I am far from thinking that its interest is exhausted, yet I am inclined to believe that just at present the walls of Jericho—as Mr. Bradley has called them—are in less danger from the blasts of that particular horn than from the steady undermining of the other party. Moreover, I believe that idealists have really more to learn from the new Realism than they have from Pragmatism. Pragmatism, as it seems to me, does little more than repeat, with one-sided exaggeration, a point that was on the whole sufficiently brought out by Kant, and that most idealists have learnt from him. Personally, at any rate, I think I have never failed to acknowledge what seems to me to be the small element of truth in their main contention—*viz.*, that we could never make any progress in life or thought if we did not believe before we are able to prove; and that in some important matters the proof must always be very incomplete and tentative. The new Realists are also in the main, like the Pragmatists, empha-



sising a point that is to be found in Kant; but it is one that is found only in the second edition of his *Critique*, and one that he never quite succeeded in making clear, and that most succeeding idealists have perhaps not sufficiently appropriated. I believe that the attempt to understand this point may lead us to a truer conception of what Idealism properly means.

The new Realism may seem at first sight to convinced idealists—like Protection in economics—to be a return to an exploded superstition. It may seem to be merely the revival of a crude materialism, like that which prevailed among the early Greek philosophers, before any real epistemological reflexion had set in; or of the somewhat more refined conception of matter that we find among the early Cartesians, or in the so-called philosophy of Common Sense. But further reflexion will, I think, convince us that it is no mere revival of past errors, nor even simply a new error, but an attempt to deal with a genuine difficulty, in the form in which it is presented by recent idealistic speculation. It is directed against subjective Idealism; and its real value is to be found in what may, I trust, prove to be the final laying of that obdurate spectre.

There are many recent writers who have sought to develop a realistic doctrine in the sense that I am now seeking to indicate. I might instance the profound (if somewhat tantalising) discussions of Adamson, or the more recent papers by Profs. Stout<sup>1</sup> and Alexander; and I believe that a great deal of what has been said, especially by the last two, is traceable, directly or indirectly, to the very able and suggestive writings of Avenarius. But there is no one who seems to me to have put the main points with more clearness, directness, and force—and certainly none who has pushed them more ruthlessly to their conclusion—than Mr. G. E. Moore; and in what follows I have his statement of the case more directly in mind than that of any one else.<sup>2</sup> It is not my intention, however, to follow his arguments closely. My object is not to criticise any particular writer, but rather to bring out what seems to me important and valuable in the general view to which I refer.

<sup>1</sup> Prof. Stout has, as I think, both stated the realistic position in its most intelligible form and also indicated most successfully how it can be reconciled with idealism.

<sup>2</sup> His *Refutation of Idealism* is what I have chiefly in view, but I have also made use of his *Principia Ethica*, nor have I been entirely unmindful of some applications of his ideas by Mr. Russell in his *Philosophy of Leibniz* and in his *Principles of Mathematics*.

What I shall try to do, then, is, first of all, to state Mr. Moore's main point, as I understand it; then to consider what elements of truth and of falsity are contained in it; and finally to discuss its significance for those who seek to maintain an idealistic position.

Mr. Moore seems to regard all modern Idealism as resting ultimately on Berkeley's '*Esse is percipi*'; and he conceives that, by finally subverting this position, he makes an end, not indeed of idealism, but of the only basis on which modern idealism has been supported; and, perhaps he would add, the only basis on which it can be supported.

Now, I may say at once that, with regard to British idealism at least, this view seems to me to contain a very large element of truth, though it is by no means the whole truth. Most British idealists begin from the subjective side; though they usually end—even Berkeley does so—by, to a considerable extent, renouncing their subjectivity. But, by proceeding in this way, they leave the impression—and often, I am afraid, it is a quite correct impression—that the real basis of their position is subjective, that '*esse is percipi*' is in the end their most fundamental conviction. This is, I think, due in the main to the predominant place that has been occupied by introspective psychology in British philosophy.<sup>1</sup> The growth of the more genetic method of studying psychology is gradually introducing a different way of thinking.

If, for instance, we take T. H. Green as a typical representative of modern British idealism, we find that his basis is in the main a subjective one. I cannot of course enter into any examination of his position here; and it is difficult to do justice to it in a brief summary. But on the whole it seems true to say that his point of view is not very widely removed from that of Berkeley. The difference is mainly that he begins, where Berkeley leaves off, with an intellectual, as distinguished from a perceptual presentation of his case.<sup>2</sup> Now, I admit that this distinction is in the end

<sup>1</sup> The use of 'psychological hedonism' as the basis for an ethical system might be profitably compared with this. On the other hand, it may be noted that the logic by which Sidgwick sought to show that pleasure is the only ultimate good, is very similar to the logic of Mr. Moore.

<sup>2</sup> See especially his Introduction to Hume, §§ 184-185. 'A relation is not contingent with the contingency of feeling. It is permanent with the permanence of the combining and comparing thought which alone constitutes it. . . . Of such a doctrine Berkeley is rather the unconscious forerunner than the intelligent prophet. . . . Is the idea, which is real, according to him a feeling or a conception? Has it a nature of its own, consisting simply in its being felt, and which we afterwards for purposes

a fundamental one, and destroys the subjective position; but I think it is true that Green does not really succeed, much more than Berkeley does, in making its fundamental character apparent. It is clear that the world for Green is an intellectual construction, not a perceptual datum—as at first it appears to be for Berkeley; but it still appears to be a construction that is completely carried on within some individual mind, or, at any rate, within some quasi-individual mind.<sup>1</sup>

The more recent system of Mr. Bradley has in some respects a much more objective aspect. His repudiation of the ballet of bloodless categories is familiar to every one; and his criticism of the Self goes far to destroy subjectivity. Yet, on the other hand, he is on some fundamental points far more decidedly subjective than Green, or perhaps than any other prominent representative of idealism. Certainly by his constant appeal to 'experience,' as at once the starting-point and the goal in the search for reality, he gives to his philosophy a subjective turn from which he is never quite able to free it. The world for Mr. Bradley is a straightened out experience, but still it is an experience, and nothing more; and, indeed, the most purely subjective aspect of experience—mere feeling—seems in the end to be for Mr. Bradley its most important and significant aspect.<sup>2</sup> Similar remarks apply, though with some qualifications, to the type of idealism set forth in Prof. Taylor's *Elements of Metaphysics*.

Now, it is against all such tendencies in philosophy that the new Realism lodges its protest. The world that we know, it urges, is not something in the mind, but something that the mind apprehends. We know the world before we know the mind and what is in it; or at least we become gradually aware of these two aspects of reality through what is intrinsically the same process. Now, this contention can hardly be said to be a novelty in modern philosophy. The main point in it is that which was urged by Kant in his 'Refutation of Idealism,' and which is constantly urged

of our own consider in various relations; or does the nature consist only in relations, which again imply the action of a mind that is eternal—present to that which is in succession, but not in succession itself?'

<sup>1</sup> By calling his mind 'eternal' or 'timeless,' he no doubt makes it cease to be a mind in any ordinary sense. But still he seems to imply that we are somehow to figure it to ourselves as being a mind—i.e. a consciousness.

<sup>2</sup> Some interesting comments by Prof. Henry Jones on this aspect of Mr. Bradley's philosophy will be found in the *Hibbert Journal* for April, 1906.

by at least one of the leading representatives of modern Idealism—Dr. Edward Caird.<sup>1</sup> It can only be supposed to tell against Idealism in so far as Idealism is understood to rest upon the principle that '*esse is percipi*'. Now, what I wish to maintain is that Idealism, when its meaning is rightly understood—Idealism, as we find it put forward by its best exponents, such as Plato among the ancients and Hegel among the moderns—does not depend, even in the slightest degree, upon the principle that '*esse is percipi*'. I would even go farther, and maintain that all idealism worthy of the name—including even that of Berkeley himself—depends upon the absolute rejection of that principle. In order to bring this out, however, it is necessary to consider a little more precisely in what sense the objectivity of the world of our experience is to be understood.

Mr. Moore's position, as I understand it, will here afford us a convenient starting-point. He draws a sharp distinction between consciousness and the objects that are set before it, representing each as having an existence quite independent of the other. Thus, if I see a tree, there is the tree, on the one hand, and my consciousness of it, on the other. But, equally, if I feel hunger, there is hunger, on the one hand, and my feeling of it, on the other. If I think that two and two make four, there is the truth of two and two making four, on the one hand, and my consciousness of it, on the other. Even if I am simply pleased, this experience may be analysed into the two quite distinct elements, pleasure and my feeling of it.<sup>2</sup>

Put in this way, the position is a highly paradoxical one; and I do not think that it can be really defended against some very obvious criticisms. It is rightly urged against it, in particular, that we know nothing of a consciousness divorced from all objective reference. To affirm such an

<sup>1</sup> See his book on Kant, *passim*; and cf. his recent paper on 'Idealism and the Theory of Knowledge' in the *Proceedings of the British Academy*. The following sentences from his book on Kant may be more particularly noted. 'Properly speaking, ideas cannot be treated as states of an individual subjectivity, but only sensations; for ideas imply a reference to the "I think" on the one side, and to the object on the other. An idea always stands for something, is a symbol of something else than itself, to the ego that has the idea. But for that reason, it must be contemplated as other than a state of the subject for which it is' (vol. i., pp. 640-641). 'Idealism, in the proper sense—the doctrine that the reality of the material object lies ultimately in its necessity as an element in the evolution of spirit' (p. 644). These passages really sum up all that I have to say in this paper.

<sup>2</sup> This last point is brought out, with special emphasis, in the *Principia Ethica*.

existence is to attempt to substantiate what we know only as an aspect of our experience. It is the *cogito* of Descartes carried to an even more extreme refinement of abstraction. Certainly, pain, hunger, the colour yellow, a tree, a triangle, an axiom of geometry, a moral requirement, an article of religious faith, a poetic ideal, all contain something which is of the nature of an objective material set before our consciousness; but what would that consciousness be, apart from such objective material? When I am conscious of yellow, the yellow is certainly something of which I am conscious; and it is something of which somebody else might be conscious. Nevertheless, it is surely not true that in this fact of experience there is consciousness + yellow. If you remove the yellow, you remove the consciousness as well. This has been already urged against Mr. Moore; and it seems to me so obvious, on reflexion, that I do not think it necessary to press it further.<sup>1</sup>

But the next point is this. It seems clear, as I have just stated, that, in the experience of yellow, if you remove the yellow, you remove the consciousness. Now, can we say, in like manner, that, if you remove the consciousness, you remove the yellow? This is the really crucial question. And if it is raised specifically in such a case as that of yellow, the right answer is not at once apparent. On the one hand it may be urged that, if we try to think of a yellow which is not the experience of some individual consciousness, we do not seem to be able to attach any meaning to it. Yellow is a colour: a colour is something seen. What could it possibly be, then, if it were not seen? On the other hand, I seem to be able to identify the yellow that I see to-day with that which I saw yesterday, though the two experiences as such are quite distinct; and it even seems to be possible to compare my apprehension of yellow with that of some one else, and to pronounce that they are the same or different. On these grounds it may be urged that I can distinguish the yellow that I experience as something objective and distinct from the fact that I experience it. Perhaps, however, the solution of the problem will become more apparent if we consider instances somewhat different from that of yellow. Let us try two extremely different types of cases. Let us take pleasure, on the one hand, and an axiom of geometry on the other.

<sup>1</sup> I may refer, however, to the paper by Mr. C. A. Strong in *MIND*, April, 1905, entitled, 'Has Mr. Moore Refuted Idealism?' where this aspect of the question seems to me to be very well stated.

In the former case, it seems clear, in spite of both Plato<sup>1</sup> and Mr. Moore, that there is no meaning in speaking of pleasure except as the experience of some individual consciousness. It is true, indeed, that I can think of pleasure without having it; and this fact seems, at first sight, to present considerable difficulty; for it seems to imply that we can represent pleasure to ourselves by means of some other characteristic than that of its being felt. This is a point to which I intend to return. Setting this aside for the present, it seems to me that there is no doubt that we can only think of a pleasure which is not directly present to us as a past or future pleasure of our own or as the pleasure of some other sentient being. A mountain-peak which is inaccessible to us is, none the less, a mountain-peak. The other side of the moon, which we cannot see, is as much of a reality for us as that which we can see. Perhaps also there is some sense in which it can be maintained that a colour which no one can see is a real colour; but I cannot find any intelligible meaning in the statement that a pleasure which is quite unattainable by any one is a real pleasure.

In the case of a geometrical axiom the conditions are very different. Take, for instance, the statement—'If equals are added to equals, the wholes are equal'. Can it be properly said that the judgment here expressed is something that exists in any one's mind? Certainly, when any one discovers the truth of it for the first time, or recalls it to his recollection, or tries to explain it to some one else, some psychical process is taking place in his mind. But is that psychical process the judgment? It seems clear that it cannot be; for the judgment is the same for every one who understands it, whereas the psychical process is different every time the judgment is formed. It would seem, therefore, that in this case we have an objective content that is distinguishable from the subjective fact of experience.

But this, you may say, is nothing more than the familiar distinction between an idea as fact and an idea as meaning, which is so much emphasised by Mr. Bradley in his *Logic*, and which is applied in so enlightening a way in Prof. Stout's *Psychology*. Certainly, I do not claim that it is anything more than this; but I doubt whether, in spite of its familiarity, all that is involved in it is often quite clearly realised. I doubt even whether Mr. Bradley himself always keeps it

<sup>1</sup>Aristotle, as well as Plato, seems to give some countenance to the view that pleasure is separable from the consciousness of it. He recognises, that is to say, like Plato, a distinction between real pleasure and the appearance of pleasure.

sufficiently before him in the course of his metaphysical speculations. Nor do I think it easy to do so; for the distinction is really one of considerable difficulty; and I believe it may be worth while to give a little more time to its elucidation. Let us consider, for instance, what it would mean if applied to the case of colour, of which we were previously speaking. In the case of pleasure, broadly speaking, we mean nothing more than what we experience. In the case of a geometrical axiom, what we mean is almost completely separable from what we experience. In the case of colour, the two distinguishable aspects would seem to be more evenly balanced. We may simply experience yellow, and in that case it is nothing more than what we experience; and each one of us may be said, in that sense, to have a yellow of his own. But if we go on to name the colour and discriminate it from other colours, we are beginning, with a more or less clear consciousness, to give it a place within a relational scale; and that scale has an objective significance, just as a geometrical axiom has. It is not simply something that we experience, but something that we mean.

Now this is what I wish to emphasise. There is such a thing as meaning, and meaning always carries us beyond what is immediately before our consciousness. This is, I think, a point that is, in general, not sufficiently recognised even by most of those philosophers who at times acknowledge its truth. Most of us no doubt recognise it readily enough in some of those instances that Dr. Stout has made familiar to almost all philosophical students. In the case of an animal instinct, for example, most of us are readily prepared to admit that the animal means a great deal more than it consciously realises to itself; and most of us have learned to repeat Emerson's line about the cathedral builders—'They builded better than they knew'—and to acknowledge a certain truth in it. But, with all this, I fancy it remains true that most of us are apt to suppose that, in the developed human consciousness at any rate, everything that we mean is, in the phrase of Descartes, a 'clear and distinct idea,' standing in our minds like a picture in its frame. This is the view, as I think, that we must learn to reject. Descartes, as we all know, even speaks familiarly of the idea of the infinite, as if it were actually to be found in our minds in a sort of bodily form. Most of us would probably recognise that this at least is untrue, that the idea of the infinite, at least as understood by Descartes, is of the nature of an ideal, something that we may mean but that we cannot formally realise to ourselves. It does not require very



much further reflexion to see that all such conceptions as those that are put before us by Descartes, go beyond anything that is contained in our consciousness as an individual experience. This, I take it, was what Malebranche meant by his famous declaration that we 'see all things in God,' or, as we should express it in more modern phraseology, that we refer all our ideas to an objective system. And it is no doubt essentially the same point that Green has in his mind when he speaks of an 'eternal consciousness'; but this way of speaking of it is an attempt to represent it as being subjective after all.

Even Berkeley came to see this to some extent in the end, and qualified his '*esse is percipi*' by recognising that it does not apply to those things of which we have what he calls 'Notions'—*i.e.* those conceptions that cannot be directly pictured or experienced, but with reference to which it can be said, as he himself expresses it, that we 'understand what they mean'. And this, I think, is what all genuine Idealism must recognise. Indeed, I am tempted here to put forward another point, though possibly it is not an altogether fair one; to affirm, namely, that, so far from its being true that Idealism rests on the principle that '*esse is percipi*,' it would be much truer to say that it is Mr. Moore and the New Realists who rest upon that principle. It is true that they begin by inverting it. Their doctrine is not that '*esse is percipi*'; but they do at least come very near to the doctrine that '*percipi is esse*,' *i.e.* that an independent reality is to be ascribed to everything that appears as an immediate object of consciousness, whether it be pleasure or hunger or colour or an individual material thing or a general concept or a statement of relations. In philosophy, as in love, things often go by contraries. The man who preaches 'the will to believe' is generally at heart a sceptic; indeed, all our most recent dogmatism would seem to rest on 'philosophic doubt'; and so the new realist seems to be in truth one who is persuaded that things are just as he apprehends them.<sup>1</sup> The idealist, on the other hand, maintains that what is directly perceived is never in itself real; and that even the object brought before us in conceptual thinking is only a partial suggestion of reality. Reality for the idealist—speaking generally—is the concrete whole, which is never an object of direct apprehension, and perhaps never can be.

This brings us back, you may say, to the point to which we previously referred—the distinction between the per-

<sup>1</sup> Cf. Joachim, *The Nature of Truth*, p. 55 *sqq.*

ceptual and the conceptual modes of apprehension—and, with that, to the old controversy between Nominalism and Conceptualism. But, in reality, the view that I am now urging carries us a good deal farther than that. It is not merely in the fully developed concept that we have to recognise the presence of meaning, but rather throughout the whole field of our experience. If we were limited to that which is contained within our immediate experience, our world would be practically a blank. It would be simply Hume's stream of perceptions that succeed one another with inconceivable rapidity. It would have no connexion, no identity, no continuity.

But now a fundamental difficulty may be raised. It is all very well, it may be said, to speak of a world of meaning as carrying us beyond the world of psychical fact. But may not such a world be compared to a paper currency, or a general system of credit? Must it not be based, in the end, upon some sort of gold reserve? And what, it may be asked, can we possibly have in reserve but the immediate facts of our experience? This is essentially Hume's point; and it is this point that the modern realist and the modern idealist both have to meet. Both are opposed to the doctrine that '*esse is percipi*'; and this, it must be remembered, is essentially the doctrine of Hume, and is not really the doctrine of Berkeley at all. It is the doctrine of the sceptic, not that of the idealist. Berkeley no doubt seems to begin with it; and so perhaps do some more recent idealists. But even with Berkeley the doctrine that *esse is percipi* is almost immediately modified by the recognition that, in the case of conscious beings, *esse* is rather *percipere*; and in the end he comes at least very near to the affirmation that: for the Universe as a whole, *esse* is *intelligi*. His ultimate criterion of the truth of anything is that we can understand what it means; and this is really the criterion which every idealist, from Parmenides<sup>1</sup> downwards, seeks to adopt. It is the sceptic, not the idealist, who rests upon the rigid doctrine that *esse is percipi*; and realists and idealists are absolutely at one in waging war against this. Well, then, what we have to ask is, How is that doctrine to be finally refuted? Is it not true, according to my illustration, that we have to come back to it as a sort of gold reserve? Even Mr. Bradley, the protagonist of modern idealism in one of its senses—and, indeed, in a sense that apparently aims at being objective—

<sup>1</sup> In spite of Prof. Burnet's very instructive exposition, which I greatly appreciate, I still regard Parmenides as the founder of idealism.

sometimes seems to do so. The idea of space, he seems to tell us, must be extended; the idea of weight must be heavy; the idea of yellow must be coloured; the idea of agreeableness must be pleasant; and so on. Now, is all this true?

Well, I agree with our modern realists in believing that this is not true; and it is here, as I think, that they have been doing valuable service, by which idealists may profit. The idea of weight, it seems to me, is not heavy; nor that of space extended; nor that of yellow, in any full sense, coloured; and even that of agreeableness is not always directly pleasant. Rather, I should say, it is of the essence of every idea to go beyond itself. But how, you may ask, is it able to do this? I might simply retort, How is it able to avoid doing this? I cannot imagine what an idea would be that should not do this. But it may be more satisfactory to put the answer in the following way. An idea is essentially alive: it is not something purely statical. This I believe to be the element of truth in the view of those who emphasise the volitional aspect of our consciousness. All mind is of the nature of process, and is in its essence forward-looking. Our ideas are continually going on: as it has been said, they 'have hands and feet'. Now, when an idea is thoroughly alive, it is what we call an ideal: it is not simply what it is, but what it is aiming at. What we have chiefly to consider in such a case is, in Aristotle's phrase, its *το τι ἦν εἶναι*—'what it essentially was,' or 'what it had in it to be'. Even the idea of a pleasure may be of this anticipatory character—a scheme, an outline, a suggestion, rather than a fully formed experience; and this, I think, is the solution of the difficulty that was raised a little time back.

Still, it may be urged, surely what we mean cannot at least be entirely foreign to what we experience. However we may press forward, we cannot 'leap off our own shadow'. Now, this also, I think, is true; and it is here, as I believe, that pure realism must in the end break down, and lead us on to a purified form of idealism. But let me try to make this point a little more definite.

It may help us a little here if we consider first some of the illustrations that are suggested by Mr. Bradley. Take the case of weight. It certainly does not seem to me that the idea of weight is heavy. I cannot find that the thought of a pound weight is any heavier than the thought of an ounce. Yet, on the other hand, I freely admit that I could not attach any meaning to weight at all if there were not something in my experience that enabled me to take hold of it. And what this is it is not, in the present instance, very

difficult to discover. I give meaning to weight by the help of my ideas of pressure, strain, and possibly some other sense experiences. But what again are we to say of these? Does the idea of pressure press? This also, I think, would hardly be quite true; but there is assuredly a sense element contained in it which forms the basis for what I mean by pressure. Something of the same sort may be said about extension. The idea of space does not seem to me to be extended; but I think we arrive at it by the help of the element of extensivity which is contained in our tactual experiences; and I do not see how we could ever reach it without this element. Now, if we follow out the line of thought that is suggested by these illustrations, it seems to me that we shall be led, in the first instance, to a view that may be expressed by means of the previous figure. Our world of meaning may, rightly enough, be compared to a vast credit system, that carries us far beyond any gold reserve that we can call upon within the world of our direct experience; yet it is supported, in the end, by means of that reserve. Or, to drop this figure, which is not altogether a good one, we may say that the world of meaning would be quite unmeaning if it did not start from and return to a world of conscious experience. But what exactly does this mean, and what does it imply?

We may perhaps arrive at an answer to this by asking, What are the different ways in which the world of meaning may be interpreted? One way of course is that of Hume. We may say that it is entirely illusory, so far as it is not a direct reproduction of some fact of immediate experience. But I think it has been found—and, indeed, it was clearly enough seen by Hume himself—that this view not only makes knowledge impossible, but even makes it impossible to see how there can be any illusion of Knowledge. Another way is to say that we are driven by a natural impulse to affirm a world that we mean, as distinguished from one that we directly experience; and that we affirm it simply on the basis of our volition. This seems to be essentially the position of Pragmatism. But certainly the facts that we are concerned with, when we speak of meaning, carry us far beyond the region of actual volition. We surely do not will to apprehend weight and colour; and, indeed, it is difficult to see how we can will anything that we have not first experienced. Nor is it easy to understand how our volitions could arise without any ground, or be continued without any support. A third view is to say that in the world of meaning we apprehend a reality quite distinct from the

subjective world of our direct experience. This is practically what is said by all dualists; and our new realists say it in their own particular fashion—perhaps the best fashion. But such a view has plausibility only if we can maintain the sharp distinction between our consciousness in itself and that of which we are conscious; and this, as we indicated at the very outset, seems to be impossible. Now, there is, I think, only one other view that is open to us; and that is the view to which I have been seeking to lead up, *viz.*, that we are justified in affirming a world of meaning, but that it is a world that can only be interpreted in relation to conscious experience. This seems to me to be in the end the only view that is really intelligible.

Indeed, as far as I can see, our new realists do not even set up any definite alternative to this idealistic position. Mr. Moore professes to give us a refutation of idealism; but what he really gives is a refutation of scepticism—*i.e.*, a refutation of the view that *esse* is *percipi*. His only arguments against idealism appear to be (1) that it can only be proved by means of the doctrine that *esse* is *percipi*; and that, apart from this, it is a mere assumption; (2) that it is paradoxical, involving the rejection of some inevitable beliefs of common sense.

As regards the first of these, I have already urged that, so far from resting on *esse* is *percipi*, idealism rests rather on the rejection of this dogma. But, in order to meet Mr. Moore's point more completely, it is right that I should try to explain in what way I suppose an idealistic view of the world to be established.

In a certain sense, I am very ready to admit that the truth of idealism is incapable of proof. No ultimate presupposition of thought can be proved, in the sense of being deduced from something more ultimate and evident than itself; and the general nature of our universe seems to me to be such a presupposition. We evidently cannot rest it on anything like the '*cogito ergo sum*' or the 'clear and distinct ideas' of Descartes; nor, I fancy, can we establish it in any other way 'after the fashion of geometry'. Now it is a proof of this sort that Mr. Moore appears to desiderate; and in this sense I am perfectly willing to allow that no proof is forthcoming. But many things that most of us accept with considerable assurance are in the same position. Most of us believe that sugar is sweet, and that Shakespeare is a great poet; and few of us would feel any stronger conviction on these points if they could be set out in the form of a mathematical deduction. But, you may say, a philo-

sophical theory is in a different position. Well, no doubt it is; and, indeed, Shakespeare's poetry is in a different position from the sugar. But what I mean is that, in all cases, we can only prove things by the kind of proof that is appropriate to them—derivative things by showing from what they are derived, ultimate things by giving grounds for regarding them as ultimate. And, in the case of a philosophical theory, the only ultimate kind of proof that can be given is that the theory seems to make the universe intelligible to us, and that we cannot think of any alternative theory that does. But, you may object, can any idealistic view of the universe claim to be thoroughly intelligible? Are there not serious gaps in every attempted construction? Well, if you mean by this to ask whether there is any idealistic theory that enables us to explain every particular fact in the universe, then it must certainly be confessed that this is not the case; and, speaking for myself, I am enough of an agnostic to suspect that, in this present life at any rate, I am not likely ever to meet with such a theory. No one, I suppose, at the present time, expects any philosophy to do for us what Socrates is represented in the *Phædo* as saying that he had expected from Anaxagoras. "I imagined that he would tell me first whether the earth is flat or round; and then he would further explain the cause and the necessity of this, and would teach me the nature of the best and show that this was best; and if he said that the earth was in the centre, he would explain that this position was the best, and I should be satisfied with the explanation given, and not want any other sort of cause. And I thought that I would then go on and ask him about the sun and moon and stars, and he would explain to me their comparative swiftness, and their returnings and various states, active and passive, and how all of them were for the best." A philosophy which could explain all this might also be expected to tell us who was the author of the Letters of Junius, or why the present Government was put in power with the precise majority that it has. It would evidently be absurd to expect any system of Idealism to show the rationality of the universe in such a sense as this. Perhaps it is even true that there is no idealistic theory that makes the significance of every leading aspect of our experience thoroughly transparent. Even this degree of light I certainly do not expect speedily to attain. But what I do venture to maintain is, that it is quite possible to think out an idealistic interpretation which enables us to view the universe as a system that is intrinsically intelligible throughout; and, so

far as I can see, there is no other kind of interpretation that does enable us to do this.

This point, however, connects very closely with the second objection to idealism to which I have already referred. Mr. Moore and some others seem to think that idealism is open to objection on the ground that it is fundamentally paradoxical; and that some sort of realism is to be preferred to it on this account. Idealism, as Mr. Moore says, "is certainly meant to assert (1) that the universe is very different indeed from what it seems, and (2) that it has quite a large number of properties which it does not seem to have. Chairs and tables and mountains *seem* to be very different from us; but, when the whole universe is declared to be spiritual, it is certainly meant to assert that they are far more like us than we think. . . . When we say it is *spiritual* we mean to say that it has quite a number of excellent qualities, very different from any which we commonly attribute either to stars or planets or to cups and saucers." Now, if the contention that idealism is paradoxical merely means that it leads us to some new and unexpected conclusions, this can hardly be an objection to a philosophical theory; and of course Mr. Moore does not mean to imply that it is. But if it means that some aspects of our experience are made unintelligible by it—and this, I think, is what he wishes to suggest—then certainly the objection is a very serious one indeed, and brings us back to the point that we have just been considering. Now, in what way can it be urged that idealism has this result?

When we ask, what are the paradoxical conclusions to which idealism points, we generally find, I think, that they arise from confounding idealism with subjectivism. Berkeley's view—at least in his earlier statement of it—is, I think, really paradoxical. It does make it almost impossible—probably quite impossible—to give an intelligible account of the material system as we know it. But idealism, in the more objective sense, is certainly not open to this objection. For what is it that objective idealism asks us to believe?

Mr. Moore and some others seem to think that idealism asks us, as Hegel put it, to stand on our heads and view the world all topsy-turvy. There is surely no foundation for this. It is a sort of view that is sometimes put forward about physical science, as well as about idealism. Mr. Balfour, for instance—our modern Gorgias—in his well-known address to the British Association, referred pathetically to the way in which the physicist shows that our ordinary life is passed in a world of illusion. Of course there is some truth in this. But surely it is only true in



the sense that physical science convinces us that there are more things in heaven and earth than we are commonly aware of, not in the sense that any of the familiar objects of our knowledge are other than what we familiarly know them to be. Any advance in knowledge may be said, in the former sense, to convict us of a previous illusion—the discovery, for instance, that water, which seems so simple, is composed of oxygen and hydrogen; or that our earth, which seems so stable, revolves round the sun. But the former has not afflicted us with any fresh fear of drought; nor has the latter tended to depreciate the value of property. Now, it is just in the same sort of sense that idealism changes our view of the world around us. The idealist does not seek to rob any one of his sun and planets, nor even of his cups and saucers. To say that something is more than what it seems is not to say that it is not what it seems. When Shelley sings to the skylark :—

Hail to thee, blithe spirit!  
Bird thou never wert,

he does not really mean to deny that the lark belongs to the class 'Aves'. Or, when Wordsworth blames Peter Bell, because 'a primrose by the river's brim' was to him only 'a yellow primrose,' he is not accusing him of an error in botany. Even the plainest of plain men are constantly recognising that things are not merely what at first sight they appear. An antiquarian is not as a rule a speculative philosopher; but cups and saucers are not merely cups and saucers for him. They may be specimens of rare china. For the mathematician, again, the rims of the cups and saucers may be circles. For the artist they may have all sorts of excellent qualities which the ordinary person does not detect in them. For the manufacturer they are the results of a certain process. Even for the tea-drinker they have a purpose; while the sociologist is well aware that their presence here at all can only be explained by the gradual development of the arts. If all these people have a right to deal with cups and saucers, and to show us that there is more in them than we see at first, why should the philosopher alone be warned off, as if he were 'a bull in a china shop'? Has not the philosopher as good a right as Browning to maintain that, not only cups and saucers, but all other things as well, can only be finally made intelligible when they are thought of as parts of a system to which life and intelligence are the key? May we not say with his Rabbi Ben Ezra :—

Look not thou down but up !  
 To uses of a cup,  
 The festal board, lamp's flash and trumpet's peal,  
 The new wine's foaming flow,  
 The Master's Lips a-glow !  
 Thou, heaven's consummate cup, what need'st thou with earth's wheel ?

There is no real paradox, as I conceive, in such a view of the universe. But if we are to avoid a fatal paradox, we must be careful to understand it in the objective, and not in the subjective sense ; and this is what our new realism may help us to do. We must not say, as Berkeley does, that cups and saucers and stars and planets exist in people's mind, or even in some hypothetical divine mind.<sup>1</sup> We must not even say, as Kant does, that time and space are only forms of our consciousness.<sup>2</sup> Personally, I am disposed even to add that we

<sup>1</sup> The somewhat ostrich-like expedient of attempting to solve philosophical difficulties by referring them to a divine consciousness has been a familiar one in modern speculation, since the time of Descartes ; and it is still often, more or less explicitly, made use of. But it is surely evident that a truly conceptual object cannot, properly speaking, be contained in a divine mind, any more than in a human mind, unless the divine mind is something wholly different from anything that we understand by a mind. If a divine mind means a mind that is completely developed—a mind to which the universe has become perfectly transparent—such a mind would still, as far as I can see, distinguish itself from the world that it apprehends. Indeed, I cannot but think that such a mind would be more conscious of going beyond itself in the act of knowledge than the comparatively undeveloped human mind is ; just as the human mind is more clearly conscious of this than the animal mind is. The only difference would be that the fully developed mind would not be conscious of any irreducible surd in the world that it apprehended. There would be no baffling puzzles, no unexplained contingencies. It would have come to its kingdom. The world would be *its* world ; but it would still be *its world*.

<sup>2</sup> There is of course a great deal here that requires much more explanation than I am able in this place to supply. To a certain extent I have indicated the view that I take on several of the points here referred to, in my previous paper on 'The Infinite and the Perfect'. With regard to time, for instance, my view is that reality is or contains a time-process, through which intelligent beings are gradually developed. This process I believe to be eternal, but not timeless ; and how this is possible I have tried to show in the paper to which I refer. Since it is eternal, the end may be regarded as returning into the beginning ; and I think this is the true sense in which it may be maintained that God creates the world. He is, I mean, as Aristotle thought, both the beginning and the end of the world-process. Strictly speaking, it seems clear that there cannot be any such thing as creation. The universe must be eternal. But at all this I can only hint. The recognition, however, that 'eternal' does not mean the same as 'timeless' seems to me quite fundamental. I may note, in passing, that the ultimate difficulty in Mr. Joachim's book on *The Nature of Truth* seems to arise from a failure to draw this distinction. Such a failure is probably the greatest stumbling-block in the way of idealistic theories in general.

must not say, with Mr. Bradley, that the objects of our experience have only degrees of reality.<sup>1</sup> Idealism, as I understand it, admits the reality of all the objects of our experience. It leaves us our cups and saucers, our suns and planets, our primroses and skylarks, our time and space, undisturbed. What it denies is that any of these things are to be regarded as distinct and independent realities, separable from one another and from us. It maintains that they can only be interpreted as parts of a whole; that that whole is a living whole; and that its ultimate interpretation can only be found in the development of intelligence within it.

What I concede to the realist is that much, perhaps most or even all, of our British idealism has been far too subjective. This is true, I should admit, not only of those definite speculative constructions that have been attempted, but even of the general habit of mind that has prevailed, and of the modes in which it has expressed itself in literature. Browning, for instance, seems to me to fail in the end, just as Berkeley fails, and just as Green and Mr. Bradley fail, to give a truly idealistic interpretation of the world, through the fact that he has no real place for nature. He gave his attention, as he says, to 'incidents in the development of a soul; little else is worth study'. The result of this—as Prof. Henry Jones has so forcibly brought out—is, as in the case of Berkeley, to lead to scepticism as to the possibility of real knowledge; for the conditions that govern poetic thought are, after all, very similar to those that govern philosophic thought. Wordsworth, I think, showed in this a truer insight, when he looked to nature for the revelation of the spiritual significance of the universe; and with Goethe, as we know, it is the Earth-spirit that 'weaves the living robe of Deity'. It is this that we have to learn from realism. The lesson for the idealist at the present time, if I may adapt a saying of Carlyle, is—'Close thy Browning—open thy Goethe: Close thy Berkeley—open thy Plato: Close thy Bradley—open thy Hegel'. I hope that, when Browning, Berkeley, and Bradley are closed, they will not be hermetically sealed; and that when Goethe,

<sup>1</sup> There are no doubt successive stages in the development of our apprehension of reality; but I feel bound to maintain, as strenuously as Parmenides, that reality itself is one and eternal. As I have already indicated, however, I believe it to be an eternal process, with many successive stages in its growth. It is not quite clear to me whether this is what is meant by those who affirm degrees of truth and reality; but I think their meaning is somewhat different. In any case, the word 'degree' does not seem to me quite satisfactory.

Plato, and Hegel are opened, they will be read with a critical eye. But what I mean is that we have to learn to take the more objective view of our experience, if our world is ever to become really intelligible to us. That it can, in this present life, become completely intelligible to us, I by no means affirm. It is only at the end of the process—and I think it must have an end—that we can hope to see things truly. Here, I confess—in this present embodiment—we are still in the dust and heat of the forward march; and our best theories are only a sort of working hypotheses.

### III.—PHYSIOLOGICAL FACTORS OF THE ATTENTION-PROCESS (IV.).

(Conclusion.)

BY W. McDUGALL.

IN the third paper of this series<sup>1</sup> I brought forward some new and direct evidence of the important part played by motor activities in supporting and directing sensory attention, and I endeavoured to render more precise and definite current conceptions as to how they play this part. Several distinguished psychologists have been so impressed with the importance of these effects of motor activities that they have proposed to regard them as the only determinants of attention. Of these Prof. Ribot has advocated this view in the most thorough-going and explicit manner, in many passages of which the following is a typical example: "The motor manifestations are neither effects nor causes, but elements; together with the state of consciousness which constitutes their subjective side, *they are attention*".<sup>2</sup> If I do not misunderstand Prof. Ribot, we are to believe that the arrival in the brain of reinforcing impulses by way of the nerves of the "muscular sense" is the principal and essential condition of all attention, a condition in the absence of which attention of any kind or degree would be impossible. Prof. Sully also has lent the weight of his authority to a rather less extreme form of this doctrine.<sup>3</sup> On the other hand, this doctrine has been destructively criticised by Prof. Stout,<sup>4</sup> and here I have only to bring forward some experimental evidence to support his contention, to show that, even in the simplest cases of sensory attention, the part played by motor adjustments is a secondary one, and that, as Stout puts it, "'cerebro-ideational activity' is the immediate and essential condition on which the direction of thought depends. Sensory adjustment [*i.e.* motor adjustment of sense-organs] is merely an arrangement for

<sup>1</sup> MIND, vol. xii., No. 48.

<sup>2</sup> *Psychology of Attention*, p. 23.

<sup>3</sup> *Human Mind*, p. 149.

<sup>4</sup> *Analytic Psychology*, vol. i., p. 208.

intensifying and detaining sensations in the service of the 'cerebro-ideational' process."

Fechner noted that during the struggle of two differently coloured fields presented to the right and left eyes respectively it was possible by an effort of will to favour the predominance of either colour. In explanation of this effect he assumed that the intrinsic muscles of the eye that is stimulated by the colour on which attention is concentrated, are innervated more strongly than those of the other eye, and that the predominance of that colour is due to the reinforcement of it by afferent impulses from those muscles.<sup>1</sup> In the preceding section I have quoted examples of experiments which prove that the activity of the intrinsic muscles of one eye does actually reinforce and maintain in consciousness the sensation of the colour presented to that eye. In those experiments the intrinsic muscles of one eye were paralysed by means of atropine, so that any effort of accommodation brought into action the muscles of one eye only. But it seems improbable that in the normal state of the eyes, the intrinsic muscles of one eye can be more strongly innervated than those of the other, as Fechner supposed. However that may be the experiments described in part iii. of this paper<sup>2</sup> seem to prove that the voluntary favouring of one colour is not effected, or at least not wholly effected, in this indirect manner; for they show that a voluntary effort of attention may favour the predominance of the colour sensation excited through the eye whose intrinsic muscles are completely paralysed. The cerebro-ideational activity involved in a voluntary concentration of attention upon a sensation does, then, in some way, directly support the sensation and tend to maintain it in consciousness.

In a similar way voluntary effort may be shown to favour directly any one of the various modes in which an ambiguous figure (such as figure 2, p. 335<sup>3</sup> and figures 7 and 8, p. 483<sup>4</sup>) may be perceived. In these cases also it has been maintained that voluntary effort produces these effects indirectly only, that it directly effects only the adjustment of the sense-organ and that it is this adjustment of the sense-organ alone which favours the predominance of one or other mode of perception.

Thus it has been said of the staircase figure (fig. 7, p. 482) that, when we voluntarily cause it to appear as a staircase, it is by moving the eye from *b* to *a*, and when we cause it to appear as an overhanging broken wall it is by moving the

<sup>1</sup> *Abhandl. d. sächs. Ges. d. Wissensch.*, Bd. v.

<sup>2</sup> *MIND*, N.S., vol. xii., p. 481.

<sup>3</sup> *Ibid.*, No. 43, vol. xi.    <sup>4</sup> *Ibid.*, No. 48, vol. xii.

eye from *a* to *b*. But, as I have already pointed out, although these eye-movements favour these changes, it is easy after a little practice to associate each change with the opposite movement of the eyes. In the case of Necker's cube (fig. 8) Prof. Loeb<sup>1</sup> has pointed out that when one of the angles *a* or *b* is fixated, that angle tends to appear as the nearest or the most remote point of a cube, according as the accommodation of the eye is increased or diminished.<sup>2</sup>

Loeb finds that these effects are still produced if the accommodatory muscles of the eyes are completely paralysed with atropine. He is therefore unable to regard the effect in this case as the result of afferent impulses to the brain initiated in the eye-muscles, and falls back on the suggestion that the essential factor determining one or other mode of perception is the current of innervation passing out from the brain to the eye-muscles.

This modified form of the "muscular view" seems however to be no more tenable than the cruder form of it, in face of the following observations: (1) The changes of form of the cube may by a little practice be made to accompany changes of accommodation the reverse of those which they most naturally accompany, *e.g.* the angle *b* being fixated, it may be made to recede as accommodation is increased, and to become the most prominent point of the figure as accommodation is relaxed.

(2) A point midway between *a* and *b* may be fixated and, while this fixation is maintained, either of the principal forms suggested by the figure may be called up at will, and its presence to consciousness may be prolonged by an effort of attention. The influence of voluntary effort was studied by the method applied to the study of the struggle of two differently coloured fields presented to the two eyes (p. 478<sup>3</sup>). The results of one experiment may be quoted:—

Necker's cube (fig. 8, p. 483). Point midway between *a* and *b* continuously fixated during 118" in each case.

1. Passive:—

$$27a = 11'', 21b = 11'', \text{flat} = 96''.$$

2. Holding *a*:—

$$29a = 28'', 15b = 7'', \text{flat} = 83''.$$

3. Holding *b*:—

$$22a = 9'', 24b = 21'', \text{flat} = 88''.$$

4. *a* and *b* held in turn as long as possible on each appearance:—

$$24a = 19'', 15b = 14'', \text{flat} = 85''.$$

<sup>1</sup> *Pflüger's Archiven*, Bd. xl.      <sup>2</sup> *Ibid.*

<sup>3</sup> *MIND*, N.S., No. 48, vol. xii.



## 5. Passive:—

$$22a = 8'', 21b = 8'', \text{flat} = 102''.$$

In this table *passive* means that throughout the period of 118 seconds the subject maintains as far as possible the attitude of a passive spectator of the changes; *holding a* means that he made efforts to recall that form of the cube of which the angle *a* appears as the most prominent point whenever the figure appeared in any other form, and endeavoured to keep that form present to consciousness as long as possible; *holding b* means that throughout 118" he made similar efforts to favour the predominance in consciousness of the other form of cube in which the angle *b* appears as the most prominent point of the figure, while *flat* means the sum of those periods during which the figure appears merely as a group of lines on a flat surface.

The continuous fixation of the central point of the figure about which the whole figure is symmetrically arranged prevents any lateral movements of the eyes which might favour the predominance of either form of cube and ensures also that any changes of accommodation shall not favour the predominance of one form over the other. Muscular factors seem thus to be eliminated, yet the influence of volition in favouring the predominance of either form of cube appears distinctly enough in the figures of the table which denote the sums of the periods during which each form was present to consciousness, though it is not very great. In some experiments made when I was quite fresh I attained more marked effects of this sort, in others, when fatigued, less distinct effects. I found the needful effort to be very severe and exhausting. Another subject who repeated these experiments had much greater success in voluntarily favouring predominance of one form of cube under these conditions. He was able to favour the predominance of the one form to the almost complete exclusion of the other, so that the appearance of one form of cube alternated with periods in which the figure appeared flat or confused. This he achieved by imagining the cube to be a square box into the open end of which he imagined himself to toss balls continuously.

The groupings of the white discs of fig. 2 (p. 335) may also be made to succeed one another in any desired order by voluntary efforts while one point is continuously fixated, and in this case the slightest wavering of the fixation is at once revealed by the appearance of bright edges to the discs. The grouping may also be changed at will in the after-image projected upon a grey surface, while eye-movements are excluded by fixation of a point on that surface. Under these conditions

two of the linear groupings can be made to alternate with one another to the almost complete exclusion of the third form. And the grouping can be controlled not only in the absence of eye-movements, but in spite of eye-movements which favour the predominance of one form of grouping only. A fine thread is laid across the figure parallel to one of the three sets of rectilinear rows and the eyes are kept moving to and fro along this thread; this, of course, greatly favours the predominance of the grouping in rows parallel to the direction of movement of the eyes, but it is possible, after some practice, to call up either of the other linear groupings at will while the eyes continue to make the to-and-fro movements in the direction of the third set of rows. This effect also may be very satisfactorily observed on projecting the after-image of fig. 2 upon a smooth grey wall on which a horizontal line has been drawn. Then, while the eyes move to and fro along this line, the oblique rows can be called up at will; and indeed it is not possible by a voluntary effort aided by such eye-movements to exclude their appearance; after some seconds, during which the horizontal rows alone appear, one or other of the oblique sets of rows appears involuntarily.

These simple observations seem to prove that neither the actual muscular-adjustments of the sense organs, nor the central innervations that produce such adjustments are essential factors in the voluntary or non-voluntary control of the direction and mode of attention to sense impressions; that they are not the means whereby this control is effected in voluntary attention, nor the cause of the direction of non-voluntary attention, but are rather effects of the direction of attention to this or that object, effects which tend to maintain and to facilitate that direction of attention.

The frequent exaggeration of the importance of the motor-element in attention is probably due to two facts: (1) the fact that all cerebro-ideational process tends to issue in appropriate motor excitement; (2) the fact that voluntary innervation of groups of muscles is a familiar process of unquestionable reality. Those who assume that the motor adjustment is the primary fact in voluntary attention and that voluntary control of attention can only be effected indirectly by voluntary control of muscular innervation admit the power of voluntarily calling up an idea in the case of ideas of movement, but deny it in the case of ideas of every other class. But there is no justification for the assumption of any such difference, and if, as all admit, we can voluntarily and directly re-enforce an idea of movement we should be

prepared to admit a similar power of re-enforcing ideas of other kinds.

The essential determinant of the direction of sensory attention, apart from the intensity, novelty or other compelling features of the sensory stimuli, is the cerebro-ideational activity, the play of excitement among the organised systems of neural elements of which the higher levels of the brain are composed. We have to suppose that these systems are in part congenitally determined, have a congenital tendency to assume in the course of development certain forms and connexions, but that throughout the course of growth and education they become perpetually modified, extended and inter-connected in the way sketched in masterly fashion by Prof. Stout in his *Analytic Psychology*.

#### ORGANISED NEURAL DISPOSITIONS AS FACTORS OF THE ATTENTION-PROCESS.

Assuming the existence of organised neural dispositions, corresponding on the neural side to the mental dispositions or mental or apperceptive systems described by Prof. Stout, I report in this section certain observations which seem to throw light upon their relations to one another and to the sensory processes and upon some of their functional peculiarities.

At the end of the first paper of this series (p. 349, vol. xi.) the following problems were defined as remaining for solution: (1) What conditions determine the penetration of the excitation-process initiated in a sense-organ to paths of the higher levels of the brain? (2) to any one such path in preference to other possible paths of the higher levels? (3) What conditions determine the perpetual shifting of the excitation-process or current of nervous energy from one higher-level path to another? (4) What conditions confine it at each moment to any one such path? The first and second of these questions have been partially answered. We have seen that besides the conditions of the stimulation of the sense-organs important factors are: (1) The general conditions of the brain as regards the quantity of free nervous energy or neurin in it, this depending largely upon the inflow of energy by all the afferent nerves, especially the afferent nerves of the viscera through which, or some of which, the organic sensations are excited; (2) the adjustments of the sense-organs which not only directly favour the reception of some one part of the total mass of sense-stimuli but indirectly, through the afferent impulses initiated by

the muscular adjustments, reinforce the excitation-processes initiated by those favoured sense-stimuli and tend to determine their penetration to some one system of higher-level paths. We may usefully characterise these as *accessory internal conditions* of attention, to distinguish them, on the one hand, from such factors as the relative intensities of the sense-stimuli, their novelty, their sudden incidence or contrasted characters which we may call *external conditions*, and, on the other hand, from the *intrinsic conditions* of attention which we have now to consider. These consist in the ever-varying states of the organised neural systems of the higher brain-levels.

At any moment of waking life some one such system is predominantly active, is the main path of discharge of neurin from the afferent to the efferent side of the brain, and as the current shifts from system to system it leaves each one in a condition of subexcitement which only gradually passes away and which we may conceive as consisting in the presence in it of a residual charge of free energy.

Let us suppose that at any moment of waking life a number of objects are simultaneously affecting the various sense-organs, and that the external and the accessory internal conditions are equally favourable to all of them (a condition of course never realised); if one of them excites a sensory tract which is intimately connected with some upper-level system that is in a condition of excitation or subexcitation it, rather than any other, will become the object of attention, and the mode of its perception will depend upon the nature of that system. Which object shall become the object of attention and the way in which it shall be perceived are thus determined by the interplay of these three kinds of factors, the external, the accessory neural and the intrinsic neural factors. Instances of the selective influence of the state of excitement or residual excitement of a neural system are frequent in common life, as when the expectation of the arrival of a friend leads one to catch the sound of his voice in the distance, or leads one to perceive him in the approaching figure of a stranger who perhaps bears but little resemblance to him; in fact all the familiar instances of pre-perception which have been adequately treated by a number of authors. An important point to notice is that the idea of the expected object need not be present to consciousness in order that the corresponding mental system shall exert its selective action upon the sensory processes; it suffices that it shall have recently been present to consciousness so that the corresponding neural disposition remains in a condition of residual excitement.

These effects are very well illustrated in the study of the ambiguous figures described above. It frequently happens that when a person looks at one of these figures, *e.g.*, the staircase figure, for the first time, he can see it only in one of its principal forms, even though he is asked to attempt to interpret it in different ways and in spite of the most varied movements and adjustments of the eyes. If then one of the alternative forms, say the broken-wall form, is named, the name, by virtue of a previously established association, calls up the idea of that form, the corresponding upper-level system is excited, the sensory excitation initiated by the figure now strikes at once into this path and the figure is seen in this form. On looking at the figure again a moment later both systems, that corresponding to the staircase and that corresponding to the broken wall, are in subexcitement and the excitation of the sensory level may strike into either one, but will then soon pass to the other, and the subject is unable to prevent the alternate appearance of the two forms. When we voluntarily determine the appearance of one or other form of an ambiguous figure, or voluntarily prolong its appearance in one form, we do that not only or chiefly by voluntarily giving to the sense-organ an appropriate setting, but by directly re-enforcing the excitement of the appropriate mental system, just as we voluntarily bring about or re-enforce a contraction of the muscles of a limb by concentrating attention on the idea of the movement to be effected by the contraction.

This influence of pre-perception may be very neatly illustrated by help of figure 2 (p. 335, vol. xi.). If an after-image of this figure is obtained and then allowed to die away while the eyes are completely protected from the light, it can, like other after-images, be revived by allowing light to fall on the closed eyelids. If, at the moment before thus reviving the after-image, one calls up the idea of the figure in any one of its principal forms, the discs will appear in the after-image at the moment of its revival, grouped as they were ideally represented.

The excitement of the upper-level system not only co-operates in selecting the object of sensory attention and in determining the mode of its appearance; it also directly supports the sensations excited by that object as against all other sensations. This is illustrated by those experiments by which it was shown above that the voluntary re-enforcement of one colour in the binocular rivalry of two colours, is not wholly indirect reinforcement by way of muscular adjustment. It is well illustrated also in the use of a microscope,

when the sensations excited by the object on which attention is concentrated through the eye that looks into the lens completely banish from consciousness the sensations excited through the other eye. This effect, too, is neatly illustrated by the observation of after-images of figure 2 (p. 335, vol. xi.). The after-sensations of the white discs are apt to disappear from, and return to, consciousness independently of one another in an irregular manner. But if one voluntarily throws them into definite grouping, say horizontal rows, then whole rows of discs tend to disappear and reappear together, and by concentrating attention upon any one such row it can be made to reappear and can be held for some time in consciousness while others come and go.

A similar effect may be still more clearly demonstrated in the following way: Figures like *a* and *b* of figure 3 (p. 346, vol. xi.) are looked at through a stereoscope and with a blue glass before the right eye and a red glass before the left eye. The red and blue fields are thus projected on the central regions of the two retinae respectively and there is struggle and alternation of the two fields in consciousness. If now one concentrates attention upon the one field and causes its coloured discs to appear successively in each of the three linear groupings, the sensations of that eye may be held continuously present to consciousness for some little time to the exclusion of the sensations of the other eye. This observation may be repeated still more satisfactorily in the case of after-images of two such figures impressed upon right and left eyes respectively.

A still more striking instance of the influence of the higher levels over the processes of the sensory level is afforded by a phenomenon which I propose to call the *cerebral induction of light* in order to mark its similarity to, and its difference from, the well-known retinal induction of light. I first noticed it under the following conditions. Two squares of red paper were laid side by side on a black ground with a narrow interval (about 1 cm. in width) between them, and a point about the centre of one of them was fixated steadily. At intervals the black space between the red squares became suddenly filled with red colour indistinguishable from that of the red squares, so that the two red areas were joined together to form a single large red rectangle. The red colour of the intermediate space persists only for a moment and disappears as suddenly as it comes. It is thus very different to the red coloration due to retinal induction, which becomes perceptible on such a dark ground adjoining a brightly coloured area after a few seconds' fixation and grows slowly and steadily

in intensity. Other similar conditions have yielded similar results of *cerebral induction of sensation*, but it is more readily obtained in the case of after-images, as in the following cases. In a figure like figure 2 a central square area comprising nine white discs was blocked out with black ink. Under brilliant illumination a bright positive after-image was obtained, and I concentrated my attention upon the grouping of the discs, causing them to change repeatedly from one grouping to another. When I then looked for the central gap in the after-image corresponding to the black square at the centre of the figure it was no longer visible, the rows of white discs ran continuously across the centre.

Again about the centre of a large black card a number of small square holes were cut, separated from one another by narrow strips and arranged in vertical and horizontal rows. This, held against a white background appears like figure 10.<sup>1</sup>

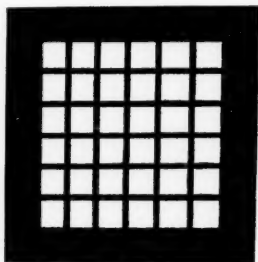


FIG. 10.

It will be noticed that, just as in the case of figure 2, the white areas tend to appear grouped alternately in vertical or horizontal rows and in other groupings, though less insistently than in the case of figure 2. This figure fixated against a

<sup>1</sup> In connexion with this figure I may take the opportunity to point out a curious illusory appearance presented by it, which, so far as I know, has not previously been described. If it is held in a good light at some 40 centimetres from the face and the eyes are allowed to wander over it, one sees a white or grey spot on each junction of the black bars except the one directly looked at. If the eyes are kept steadily fixated upon any one point the white spots rapidly become dimmer until after a few seconds they disappear. I have not been able to discover the explanation of this appearance. That the white spot does not appear upon the junction directly looked at (*i.e.* the one whose optical image falls upon the fovea) proves that it is not a simple contrast-effect and suggests that it is in some way due to the rod-apparatus. This effect may be observed particularly well when a window with small leaded panes is looked at against a bright sky. Each junction of the cross-bars, except the one at the centre of the field, appears to be perforated with a small hole.



brilliant white ground such as a white cloud, leaves a positive after-image in which each square persists as a bright area. On attending to these as vertical rows the squares of each row run together, forming uninterrupted vertical bars of light; and on attending to them in horizontal grouping they run together to form similar horizontal bars. The two kinds of bars can then be voluntarily produced alternately by attending to the two groupings in turn. It is noteworthy that when in this way the squares run together to form continuous bars, the bars appear less bright than the squares which brighten again as the bars split up, a fact which suggests that a limited quantity of energy becomes distributed through a larger number of sensory elements during the appearance of the bars.

In these and a number of other experiments in which this curious effect was observed the essential condition of its production seemed to be that the spatially separated sensations peripherally excited should strongly suggest some whole figure; the idea thus suggested then calls into existence the sensations needed to fill the gaps left between the peripherally excited sensations. *The cerebrally induced light seems in fact to be a simple form of hallucinatory sensation experimentally produced.* As in the pathological and the hypnotic hallucination, the idea moulds and modifies the field of sensations, calling into existence such sensations as are needed to complete the perception of the object represented.

The influence of the activity of the higher-level neural systems upon the processes of the sensory level, illustrated by the experiments above described, may be briefly summarised as follows. In reproductive imagination the higher-level system in predominant activity at any moment plays down upon the sensory level discharging itself through the efferent limbs of some group of sensori-motor arcs, so exciting the images of sensation which constitute the sensory content of the idea. In normal sense-perception the excitation of some group of sensori-motor arcs of the sensory level strikes into some upper-level system of paths and traversing it, issues in part to the efferent limbs of the same group of sensori-motor arcs thus supporting, re-enforcing and slightly intensifying the group of sensations due to their excitement, in part to the efferent limbs of other arcs of the sensory level in the same and in other sensory areas of the cortex, thus giving rise to images of sensation which enter with the sensations into the psychical synthesis which is the percept. In hallucination the upper-level system excites so strongly the arcs of the sensory level into which it discharges itself that,

rendering them paths of low resistance, it determines a redistribution of the energy coming in from the sense-organs, diverting it from its normal paths in the sensory area to these arcs, so giving rise to sensations which normally would not be excited by the objects affecting the sense-organs at the moment of hallucination and partially or wholly suppressing others which normally would be excited by them. When we voluntarily re-enforce one group of sensations and determine their predominance over others or their appearance in some significant grouping, we do this in part by bringing about suitable adjustments of the sense-organs, but principally by re-enforcing the excitement of a neural system which plays down upon the arcs of the sensory level; this re-enforcement of the excitement of such a neural system is the immediate physiological effect of voluntary concentration of attention, of all volition. We must briefly consider it later.

#### FATIGUE OF THE NEURAL SYSTEM AS A FACTOR DETERMINING THE DIRECTION OF ATTENTION.

In an earlier paper<sup>1</sup> I have tried to show that the rapid alternation in consciousness of two colours, when differently coloured fields are presented simultaneously to the two eyes, as when one looks at a white card with a red glass before the right eye and a blue glass before the left eye, is due to fatigue and inhibition. The red rays falling on the retina of the right eye excite a certain sensory tract or chain of neurones, R, in the visual area of the occipital cortex, the blue rays falling on the retina of the left eye excite a different chain of neurones, B, in the same area of the cortex. If both rays, and the corresponding excitations which they initiate, are of low intensity, the two excitation-processes may be propagated simultaneously through the tracts R and B, and the subject then sees the surface looked at as a purple surface, there is binocular fusion of the two colour-fields. If the two rays are of higher intensity the tracts R and B function alternately; B ceases to function while R is active and conversely, and the subject sees the surface alternately red and blue.

The cessation of activity of tract B while the blue rays continue to fall on the retina is clearly due in some way to the influence of the activity of tract R, and conversely; the two tracts are in a relation of reciprocal inhibition such that the inhibitory effect is only complete when the intensity of

<sup>1</sup> *Brain*, Winter No., 1901.

excitation is high. This is a special case of the reciprocal inhibition that we have to study in the next section. Assuming this relation to obtain between the two tracts, it remains to explain the alternate predominance of either tract in turn. That this is due to fatigue of the tracts rapidly induced during activity and rapidly passing away during rest seems to be proved by the following considerations: (1) If one tract, say R, is more strongly excited than the other by rendering the intensity of the red light falling into the right eye greater than that of the blue light falling into the left eye, the periods of dominance of red become longer than those of blue, but do not altogether exclude them. (2) If the two tracts are equally intensely excited the periods of dominance of red and of blue are approximately of equal duration, unless the dominance of one is favoured in some way at the expense of the other. These periods in my own case are seldom of more than two seconds' duration and usually are shorter, and in this respect individuals differ markedly. The predominance of one colour may be prolonged a little by a voluntary concentration of attention upon the corresponding field, but much more effectively by the appearance of movements in one field, movements of objects in the visual field being, as is well known, very effective in drawing the attention. In order to favour the dominance of one colour a four-rayed wheel is made to rotate in the field of one eye (the right eye) so that its spokes pass in rapid succession across the coloured field (red). This causes the red field to dominate completely for some seconds, after which the blue field begins to make momentary and partial appearances which increase in extent and duration as the observation is continued, without however equalling in duration the periods of dominance of the red field. After one minute the wheel is removed, so that the red field is no longer favoured by its movements. The blue field then predominates, totally excluding the red field for many seconds (in some cases as many as 15 seconds), after which the rapid alternation of the two fields begins again. In this case the artificially prolonged activity of the red-exciting tract induces in it a degree of fatigue which enables the rival blue-exciting tract to inhibit its activity for a considerable period as soon as the movements in the red field no longer favour its predominance. (3) If the left eye is kept closed for some seconds while the right eye is exposed to its red field, and the left eye is then exposed to the equally bright (or to a less bright) blue field, the blue invariably predominates at once over the red, totally excluding it for some seconds, *i.e.* the rested tract inhibits

the fatigued tract. (4) It has been shown<sup>1</sup> by continued stimulation of the motor cortex of animals that the cortical tracts are liable to a fatigue which very rapidly comes on and as rapidly passes away.<sup>2</sup>

The aim of this section is to show that our inability to continue to perceive an object in any one aspect, or more generally, our inability to attend continuously to any object in one way for more than a very brief period of time, is due to just such fatigue of the higher-level paths as is revealed in the paths of the sensory level by the foregoing observations, or in other words, that the perpetual fluctuation of the attention which is one of its most peculiar and constant features and which is but little controllable by any effort of the will, is due to the extreme liability to fatigue of the higher levels of the brain. The evidence on which I chiefly rely is afforded by observations which show that the fluctuations of attention which occur during the perception of ambiguous figures obey in almost all respects the same laws as the alternation of colours in the case of rivalry of two differently coloured fields presented simultaneously to right and left eyes respectively.

(1) Firstly, in the struggle of differently coloured fields and in the fluctuations of the mode of attention to ambiguous figures the periods of alternation are of the same order of duration (in my own case from about one half to two seconds) and exhibit similar large differences in different individuals. (2) In both cases, as has been shown above, the predominance of one of the alternating phases may be induced and prolonged by appropriate activity of the intrinsic or extrinsic muscles of the eyes, or by a voluntary concentration of attention on one of the phases without muscular activity; in both cases the prolongation of the appearance of one phase effected in either of these ways is slight, but the influence of voluntary effort is somewhat greater in the case of the ambiguous figures. The change takes place involuntarily and in spite of every effort of the will to prevent it. (3) Just as the period of dominance of one of two rival colour-fields, prolonged by any means beyond its usual duration, is followed by an unusually long period of dominance of the rival field, so when by any means the period of one mode of perception of an ambiguous figure is abnormally prolonged it is followed by an unusually prolonged period of dominance of the alternative mode of perception, *i.e.* in both cases the

<sup>1</sup> Levi, "Fatigue of Cerebral Cortex," *Journal of Physiology*, vol. xxvi.

<sup>2</sup> I have shown reasons for believing that this fatigue has its seat in the cell-junctions or synapses of the cortex (*Brain*, 1901).

continuance of one phase seems to involve a rapidly increasing fatigue of the corresponding brain-tract which very soon turns the balance in favour of the unfatigued rival tract, when the latter enjoys a prolonged period of dominance during which the fatigue of the other tract is passing away. This effect may be observed in case of figure 2, by voluntarily maintaining an alternation of the appearance of two of the rectilinear groupings in either the figure itself or the after-image of the figure. I find that it is not possible completely to exclude the third rectilinear grouping for any long period. After a few alternations of the two oblique groupings voluntarily determined the horizontal grouping forces itself momentarily into consciousness, and if the voluntary alternation of the two oblique groupings is made to continue, excluding the horizontal grouping save for these occasional brief appearances for thirty seconds or more, then, when the voluntary efforts are relaxed and a passive attitude is assumed, the horizontal grouping distinctly predominates over the other two groupings for some few seconds, until the balance is once more restored. I have found it impossible to obtain any striking evidence of fatigue in the perception of any of the ambiguous figures described in the earlier articles of this series, because I find it impossible to secure the dominance of any one mode of perception for more than a brief period of some few seconds. But there is a familiar object of ambiguous perception which enables us to observe the effects of fatigue in a manner exactly parallel to the observation of fatigue in the case of rivalry of two colour-fields.

If one looks at the sails of a windmill in motion, standing at a distance of fifty yards or more and at a point almost, but not quite, in the plane of their motion, so that the sails are seen very obliquely, it is often difficult to be sure in which direction the sails are rotating, because as one continues to gaze the sails seem suddenly from time to time to reverse their motion and at the same moment to change the plane of their motion. Let *A, B, C, D*, in figure 11, represent four sails of a windmill rotating in a plane which cuts the plane of the paper at an angle of about  $75^\circ$ . Then at one moment the extremities of *A* and *B* will seem to be rotating towards a point a little to the left of the observer while *C* and *D* move away and towards the right, the whole wheel seeming to lie in a plane cut by the line of vision at an acute angle opening towards a point on the observer's left hand; a few seconds later the plane of rotation seems to jump through an angle of  $30^\circ$ , to such a position that it is cut by the line of vision

at an acute angle opening towards a point on the observer's right hand, and at the same moment *A* and *B* seem to begin to move away and towards the left while *C* and *D* begin to move towards a point on the right of the observer. One of these phases is of course illusory, the other corresponds to objective reality.<sup>1</sup> During the former phase, *A* seems nearer to the observer than *B* and *D* seems nearer than *C*, but during the second phase *B* seems nearer than *A* and *C* seems nearer than *D*, and so long as the observer stands at a distance of thirty yards or more the disparation of the images of the sails on the two retinae is insufficient to render possible binocular perception of the relative distances of the sails. But it is clear that, if the sails are made small and are viewed from a point so near that the conditions of binocular perception of distance are satisfied, the observer will perceive the

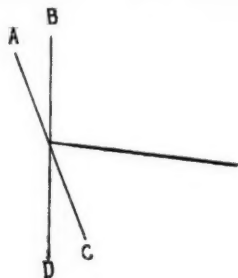


FIG. 11.

true relative distances of *A* and *B* and of *C* and *D* and that this must strongly favour the predominance of that mode of perception which corresponds to the reality. I have therefore constructed a small rough copy of a windmill. It consists of four brass rods, each 20 cm. in length, fixed at right angles to one another on one end of a long steel rod and in a plane vertical to this rod. The steel rod or axis is held horizontally in strong bearings which leave it free to rotate, and on the end remote from the four-rayed star formed by the brass rods a pulley-surface is fixed. A cord from a motor passing over this surface keeps the brass rods in rotation in a vertical plane at any desired speed. This wheel or imitation windmill is

<sup>1</sup> Since windmills may still be seen outside laboratories I venture to suggest that some anti-realistic philosopher should study these curious appearances and should tell us whether he recognises any difference between the degrees of reality or truth of the two appearances, and if so, how he proposes to account for it.

blackened and is set up in the dark room so that the observer, seated at a distance of 2 metres, sees only the four brass-rods (and a portion of the steel axis) rotating in a plane a little oblique to his sagittal plane, against a bright background formed by a sheet of parchment paper illuminated from behind.

If no other light falls on the windmill and the observer keeps one eye closed, it is impossible for him to discover in which direction the rotation takes place, whether the wheel is, as it were, rolling towards him or away from him. If he is unaware of the nature of the experiment he is equally likely to perceive at first either kind of motion, and when after a period, which varies much in duration with different observers, he perceives a sudden change in the direction and plane of rotation he, in most cases, assumes it to be an objective change, the rotation in one direction being just as clearly perceived and seemingly real as that in the reverse direction. The change of phase having once taken place and the rotation in both directions having been observed, the two phases then alternate at approximately regular intervals so long as the subject continues to observe the wheel with one eye only. If the wheel is looked at with both eyes open the subject sees the actual direction of rotation only, because binocular perception of the relative distances of the spokes of the wheel tends to prevent the illusory perception. On prolonged observation with both eyes I have observed occasional brief appearances of the illusory phase of notion. No one of the eight subjects who have kindly lent themselves to these experiments has observed the illusory phase during binocular vision, but that is probably owing to the fact that they have in no case been asked to prolong the observation beyond a period of two minutes.

In order to study more accurately the alternation of phases graphic records were made by the help of the apparatus described above (vol. xii., p. 478). These records showed the following results: (1) the rate of alternation during passive observation varies considerably among the eight subjects, the periods of the phases varying from three seconds to about twenty seconds, in most subjects being about five seconds.<sup>1</sup> (2) The periods become briefer as observation with one eye is prolonged. (3) All the subjects were able to exercise some degree of voluntary control of the phases, *i.e.*, they could prolong the periods of one phase, but this prolongation was

<sup>1</sup> It seems probable that these differences indicate some important differences of cerebral constitution hitherto overlooked.



in all cases slight, in some cases hardly appreciable, and none could prevent the appearance of the opposite phase. (4) While the subject observed the wheel binocularly only one phase (the true motion) was seen, but, if at intervals of ten seconds or more he closed one eye for one or two seconds, the illusory phase invariably appeared at once. (5) When binocular observation was prolonged for two minutes (during which the true phase alone was seen) and one eye was then closed, the illusory phase always appeared at once and persisted for an abnormally long period varying from half a minute to more than one minute, after which period the two phases continued to alternate rapidly in the manner characteristic of monocular vision. In several subjects the period of dominance of the true phase of two minutes' duration (secured by binocular observation) was always followed, when one eye was closed, by a long period of dominance of the illusory phase and this by a brief period of the true phase and this in turn by a second period of the illusory phase considerably longer than normal but less long than the former long period; and it was not until the end of this second abnormally long period of dominance of the illusory phase that the balance between the two phases was restored and an alternation of equal periods of the two phases was observed. The following figures given by a single experiment will illustrate these effects:—

During binocular observation:—

true phase only for 120"

Then right eye closed and then during monocular observation:—

illusory phase for 35"

true " " 2"

illusory " " 17"

true " " 3"

illusory " " 3"

true " " 2"

illusory " " 2"

true " " 2"

illusory " " 2"

These observations seem to show that the conditions which underlie the fluctuations of attention during the observation of ambiguous figures are similar to those which condition the alternation of colours in the rivalry of two different colour-fields presented to the right and left eyes respectively; they seem to show that in both cases a principal condition of the alternating appearance in consciousness of two objects, while the impression made on the sense-organ remains unchanged, is fatigue of the cortical tract concerned in the perception of either object, a fatigue which is induced during

the period of perception, and which rapidly passes away during the period of rest in which the other object is present to consciousness. The principal difference between the two cases is that in the case of the binocular rivalry of two colours the sensory content of consciousness changes, while in the case of the ambiguous figures the sensory content remains unchanged and only the mode of perception or apperception of it changes; the corresponding difference in the neural changes in the two cases seems to be that the paths which suffer fatigue and become alternately active and passive or, in other words, alternately transmit the stream of nervous energy coming in from the sense-organ and cease to transmit it while it is diverted to the alternative path, these paths are, in the case of the binocular rivalry of colours, paths of the sensory area of the cortex, paths of the second level in the scheme on page 333 (vol. xi.) ; while in the case of the ambiguous figures these paths are paths of a higher level and the nervous energy coming in from the sense-organ is continuously transmitted by the paths of the sensory level while it penetrates alternately to one or other of two higher-level paths.

In the discussions of fluctuations of attention authors have commonly given a prominent place to the intermittence of perception which commonly results when one attempts continuously to concentrate attention on a just perceptible sound or a just perceptible difference of brightness. Some authors, notably Prof. Münsterberg<sup>1</sup> and Prof. Heinrich,<sup>2</sup> have argued that such intermittence is due to intermittence of the adjustment of the sense-organ, of the accommodatory mechanism of the eye and of the tension of the tympanic membrane of the ear, and they have supported their contention with ingenious experiments which seem to show that such changes in the adjustments of the sense-organs do probably occur at the moments of disappearance and reappearance of the just perceptible object. But, even if it could be proved that such changes in the sense-organs invariably accompany these fluctuations of the attention, it would by no means follow that the changes in state of the sense-organs, and still less that the changes of perception, are caused by peripheral fatigue and recovery. It would remain more probable that both kinds of change are the expression of central fatigue and recovery; and this view of their causation is strongly supported by the fact that the intermittence of perception is

<sup>1</sup> *Beiträge zur experimentellen Psychologie*, Heft ii., S. 98.

<sup>2</sup> "Die Aufmerksamkeit u. d. Funktion d. Sinnesorganen," *Zeitschrift für Psychologie*, Bd. ix.

in many respects similar to, and capable of explanation on the same lines as, the fluctuations of the attention during perception of ambiguous figures; for in some of these cases, notably in the case of the windmill-illusion, peripheral changes certainly play no part in determining the fluctuations of attention which, as I have attempted to show above, have as their principal condition alternating fatigue and recovery of tracts of the higher levels of the brain.

If we accept the conclusion reached above as to the part played by fatigue of brain-tracts in determining the fluctuations of attention to an ambiguous figure through rendering impossible continued perception in any one mode, we may I think apply it generally to the explanation of the fact that normally attention always plays about its objects, passing on from feature to feature of any one object or from object to object, and cannot by any ordinary effort be arrested or fixed upon any one detail for more than a brief moment. The state of consciousness at any moment during attention to any given object has for its neural correlate the flow of nervous energy from the afferent towards the efferent or motor side of the central nervous system through some system of paths which includes paths of the higher brain-levels. Every such system forms part of some larger system or is intimately connected with other systems, and the conjunction of variable conditions, which at any moment determines the main current of energy to strike into one system of paths rather than another, must be regarded as determining in every case the realisation of one among many almost equally possible routes. Of these variable conditions the state of each path as regards degree of resistance presented by it to the passage of the current is one of principal importance. In all cases this resistance is rapidly increased by the fatigue induced by the process of transmission of the impulse from neurone to neurone across the cell-junctions. The onset of fatigue is more rapid the less canalised the path, for the less canalised the path, the higher the resistance of its cell-junctions, the greater is the consumption of potential energy in the process of transmission of the impulse and therefore the more rapid the onset of fatigue. Hence in the higher-level paths of low-degree of canalisation a very brief activity induces sufficient fatigue to turn the balance of conditions in favour of some one of the alternative systems of higher-level paths. Hence the perpetual shifting of the current from one path to another and the rapidly succeeding changes of the state of consciousness.

## THE INHIBITORY ASPECT OF THE ATTENTION-PROCESS AND THE RECIPROCAL INHIBITIONS OF NEURAL SYSTEMS.

In the normal mind the coming to the focus of consciousness of one object banishes from the focus any other object; as the attention is drawn to, or given to, a new object it is withdrawn from its object of the preceding moment. And in proportion as attention is keenly concentrated upon one topic, or system of related objects, it is more difficult for any other object to attract the attention to itself, so that even the most interesting objects which affect the sense-organs under the most favourable external conditions may fail to be noticed and the most violent sense-stimuli may excite only marginal sensations. These are facts of common experience and there is no need to dwell upon them. We can hardly doubt that this singleness of the focus of consciousness and this mutual exclusiveness of the objects of attention have their parallels in the neural processes of the brain-cortex, and without necessarily accepting psycho-physical parallelism or epiphenomenalism, one may be inclined to believe that this singleness and narrowness of the field of attention is due, not to the nature of consciousness or of the soul, but rather to the peculiarities of the neural mechanism by which our conscious life is so largely conditioned. But, whatever view one may be inclined to hold, it is clear that considerations of sound method compel us to seek to conceive the neural mechanism in such a way that these peculiarities of the attention-process shall have their neural counterparts. In terms of the scheme of the neural mechanism adopted in these papers, the corresponding physiological facts would seem to be that the activity of any one system of higher-level neurones or neural arcs is incompatible with the simultaneous activity of any other, and that the more intense the activity of any one such system the more difficult is it for processes of the sensory level to propagate themselves into any other upper-level system; that the coming into activity of any one such system brings to a stop the activity of any other system and that its activity tends to prevent any other coming into activity; in other words, there obtains a relation of reciprocal inhibition between any two such systems, no matter how widely separated in the brain they may be and how different their functions.

Physiologists are not agreed as to the nature of the processes of inhibition in the central nervous system. In an earlier

paper<sup>1</sup> I have put forward an hypothesis as to the nature of the process, the hypothesis of inhibition by drainage, which may be briefly restated as follows: The excitement of any sensori-motor arc diminishes the resistance that it offers to the onward passage towards its efferent neurones of the current of free nervous energy or neurin, and its resistance is the more diminished the greater the intensity of its excitement. If then two or more such arcs are connected together in their central parts, that one which is the most intensely excited will become for the time being the path of lowest resistance for the escape of neurin to the motor neurones, and will therefore tend to drain to itself and to discharge by way of its motor neurones the energy liberated in all the others. I have shown (1) that this hypothesis affords explanations of the facts of inhibition in the spinal cord at least as satisfactory as those of any other hypothesis and that there are great difficulties in the way of all the rival hypotheses;<sup>2</sup> (2) that many of the peculiarities of visual sensation and perception, including all the phenomena of light- and colour-contrast,<sup>3</sup> are due to inhibitory processes, occurring probably in the arcs of the sensory level, and that some of these, notably the phenomena of smoothly graded light contrast<sup>4</sup> and smoothly graded colour<sup>5</sup> contrast, the predominance of contours in binocular rivalry and the paradoxical phenomenon of Fechner,<sup>6</sup> seem to be explicable in terms of the drainage hypothesis only.

Here I wish to extend this hypothesis to the explanation of the relations of reciprocal inhibition which obtain, as we are compelled to infer from the peculiarities of the attention-process, between the systems of neural arcs of the higher brain-levels. This view is based upon evidence of three principal kinds: (1) The very close similarity between the reciprocal inhibitions that occur in the spinal and in the sensory levels on the one hand and the simplest instances of reciprocal inhibition in the higher levels on the other hand; (2) the fact that the hypothesis of inhibition by drainage seems to be the only one that is in any degree adequate to the explanation of the inhibitory processes of the higher

<sup>1</sup> "On the Nature of Inhibitory Processes in the Central Nervous System," *Brain*, Summer Number, 1903.

<sup>2</sup> *Brain*, 1903.

<sup>3</sup> "New Observations in Support of Young's Theory of Vision," pt. i., *MIND*, N.S., No. 37, vol. x.

<sup>4</sup> *Journal of Physiology*, "Proc. of Physiol. Soc.," March, 1903.

<sup>5</sup> *Ibid.*, July, 1903.

<sup>6</sup> Note in the *British Journal of Psychology*, vol. i., pt. i.

levels; (3) the fact that its acceptance solves the problem of the establishment of associations in virtue of temporal contiguity or succession of presentations, while its rejection leaves us without any explanation of this process, an understanding of which is of the first importance for physiological psychology.

We may briefly consider each of these in turn. Prof. Sherrington<sup>1</sup> has shown that any two systems of sensori-motor reflex arcs of the spinal level which control two antagonistic muscle-groups are in a relation of reciprocal inhibition, such that the stronger excitement of one inhibits completely the weaker excitement of the other, and that if the stimulations are continued the system which is at first inhibited may become active, inhibiting in turn the other more strongly stimulated system: and he has shown that if the sense-organs forming the sensory ends of the two systems are continuously and equally stimulated, the two systems may discharge themselves by their motor neurones, not simultaneously, but in regular alternation, either one in turn inhibiting the other.

The simultaneous stimulation of the two retinae by rays of different wave length (or intensity) produces, as we have seen above, exactly parallel results. The alternation of the two colour-sensations (or of the two achromatic sensations of unequal brightness) in consciousness shows that the more strongly stimulated sensory tract at first inhibits completely the other, and that, if the stimulation is continued, the latter becomes active and inhibits the former, while if both are stimulated continuously by rays of different wave length but equal intensity there results a regular alternation of activity of the two tracts. In an exactly similar way, on regarding such an ambiguous figure as fig. 7 (p. 482, vol. xii.) the regular alternation of the two modes of perception of the figure implies a regular alternation of the activity of two systems of neural arcs in the upper levels of the brain, and if the activity of one is favoured in any way equivalent to more intense stimulation it continues for some time to be active but then comes to rest and gives place to the activity of the rival tract. In all these three cases, then, there is evidence of alternating activity of two rival neural systems in relation of reciprocal inhibition, and the conditions which affect the alternations of activity and the predominance of one or other system are so similar that we can hardly doubt

<sup>1</sup> *Journal of Physiology*, vol. xxix., p. 64, and a series of papers on the "Reciprocal Innervation of Antagonistic Muscles," in *Proc. Roy. Soc.*

that the process of inhibition is of the same nature in all three cases.

The difficulties of other current hypotheses of inhibition are very great in the case of inhibitory processes in the spinal and sensory levels, but when we seek to apply them to the explanation of inhibition in the higher levels, a further very great difficulty arises from the fact that every higher-level system seems to be capable of inhibiting every other one. If, with the majority of physiologists we assume that inhibition is always effected by the transmission from the inhibiting to the inhibited group of neurones of a peculiar nervous impulse different in kind from, and opposite in effects to, the ordinary exciting impulse, then we have to assume that whenever such a higher-level system is excited it sends such inhibitory impulses either to every other such system, *i.e.* to every organised element of the brain cortex, or to every other system that is in any way excited or about to be excited, cutting short or preventing its excitement. The former alternative implies an incredibly wasteful expenditure of energy, the latter leaves us with the insuperable difficulty of explaining how the inhibiting system finds out which other systems need to be inhibited in order that it may send its inhibitory impulses to them. It would seem that it was the consideration of the latter difficulty that led Wundt to the conception of an apperceptive centre or organ of inhibition in the prefrontal lobes of the brain; this conception has found so little favour in either its psychological or its physiological aspect that it is not necessary to insist upon its unsatisfactory character in this place. The same dilemma meets us if, instead of assuming that the special inhibitory impulses cut short the excitement of all other systems, we suppose with Münsterberg<sup>1</sup> that they in some way block the efferent outlets of all other systems, or of all that are in any way simultaneously excited.

On the other hand, if, in accordance with the evidence adduced in an earlier article of this series,<sup>2</sup> we regard the neural systems of the upper brain-levels as so many organised channels by which a common store of free energy, contained in the mass of afferent neurones and maintained in them at a varying pressure or potential by the streams of energy flowing in from the sense-organs, is discharged into efferent channels; and if also we assume, as we have seen good reason to do, that during the excitement of any such channel its

<sup>1</sup> *Grundzüge der Psychologie*, Kap. 15, "Die Aktionstheorie".

<sup>2</sup> *MIND*, N.S., No. 47, vol. xii., p. 300.



normal or resting resistance is lowered in proportion to the intensity of its excitement, then it follows that the excitement of any one such system must tend to inhibit that of every other, and that the system, which at any moment is rendered by a constellation of favouring conditions the path of lowest resistance from afferent to efferent side of the brain, will divert to itself and transmit to its efferent neurones the energy which is liberated in the afferent neurones of any other system simultaneously excited and so will inhibit that system.

Now let us turn to the third line of reasoning which, as it seems to me, affords the strongest possible confirmation of the truth of this view of the inhibitory or negative aspect of the attention-process. When any two objects occupy the focus of consciousness in immediate succession, or in other words when the attention is turned directly from one object to another, they tend to become mentally associated so that the recurrence of the one tends to be followed by the recurrence of the other. It is generally agreed that the physiological process corresponding to this establishment of a mental association is the formation of a path of permanently lowered resistance between the two groups of neural elements whose excitement corresponds to the appearance of the two objects at the focus of consciousness. Further, it is generally agreed that the canalisation of such an association-path, the permanent lowering of its resistance, is the result of the transmission of the nervous impulse through it. That is to say, the excitement of one neural system, B, following immediately upon the excitement of another system, A, determines the transmission of a nervous impulse through some chain of nervous elements connecting the two systems. The problem is to understand how this is effected—how does the excitement of system B, immediately following the excitement of system A, cause an impulse to pass from A to B along some intervening chain of neural elements? This question has hardly been defined by most of the writers on physiological psychology, much less answered. The only satisfactory answer that has been suggested is that of Prof. James, namely—B drains A.<sup>1</sup> I am here only attempting to show that this is the only possible answer, to define more clearly the nature of the process of drainage, and to show that it is but a special, though the most important, case of a process constantly going on in all the different levels of the nervous system, namely the process of inhibition by drainage.

Since it must be admitted that the excitement of any

<sup>1</sup> *Principles of Psychology*, chap. xxvi., final section.

higher-level system B following immediately upon the excitement of *any other* such system A, may cause the transmission of an impulse or flow of energy from A to B, it is clear that B must in some way guide the discharge of the impulse from A, must attract to itself the energy liberated in A, so determining it to take just one path, the path A B, of all the thousand-fold paths open to it. The generalised statement of this conclusion I have elsewhere proposed to call the *law of the attraction of the impulse*,<sup>1</sup> and I have pointed out that it is necessarily implied in the wider law of the formation of neural habits. The acceptance of any view of the inhibitory process, other than the one here advocated, leaves this attraction of the impulse utterly mysterious, while on the other hand the acceptance of the hypothesis of inhibition by drainage and its application to the higher-levels of the brain explains at once the attraction of the impulse from the inhibited system to the inhibiting system and the consequent establishment of a path of lowered resistance, an "association-path," between them. When at any moment a system of sensori-motor arcs of the upper level, B, is thrown into excitement, it becomes a broad path of low resistance for the discharge in the forward or motor direction of the free nervous energy accumulated in the afferent side of the brain, and therefore it tends to drain to itself energy from all parts: there will be a sudden set of currents towards B from all parts at the moment that B is thrown open, as it were, in virtue of its excitement; and the fullest current will set towards it from that part in which energy is being most abundantly liberated, namely the system A which was predominantly excited at the previous moment, and this fullest current will flow along any channel between A and B which is most open to it and will in some degree canalise it or leave it a still more open path for the future.

Summing up, we may say that when the attention turns from any presentation *a* to any other *b*, the presentation *a* is inhibited and there results an association between *a* and *b* such that *a* tends to reproduce *b*. On the neural side these two effects, the inhibition and the formation of the association, are two effects of the one process, the attraction to the neural system B of the free-energy of the system A.

The hypothesis of inhibition by drainage seems, then, to explain very well the way in which the energy of the mind is concentrated upon the object of attention, and how the keenness of attention depends upon the general awakeness of the

<sup>1</sup> *Primer of Physiological Psychology*, London, 1905, pp. 126, 134.

mind, for it shows how the neural system corresponding to the object of attention concentrates in itself the energy liberated in all the afferent parts of the brain, and how, therefore, the quantity of energy concentrated in this system will be greater the greater is the quantity of free energy present in those parts of the brain. We have in a sense found an explanation of the singleness of the attention-process and of the focus of consciousness.

In this connexion we may briefly consider the bearing of this result upon those strange cases of dual personality or double consciousness, in which two streams of presentation seem to pass simultaneously through two foci of consciousness without interaction or interference. The current explanation of such cases, which has been approved by so high an authority as Prof. Stout, is that all the organised systems of nervous elements which make up the chief part of the brain and which normally constitute one functional group, become divided in some way into two groups which function independently of one another. The view set forth above of the neural processes underlying the inhibitory aspect of the attention-process, makes possible a clearer conception of the way in which two systems of excitement might coexist in one brain. We have only to suppose that the paths which connect some group of upper level systems with the rest of the neural systems of the brain have their resting resistance so raised as to render impossible the drainage of energy from the one group to the other. The systems of one group, while remaining in the relation of reciprocal inhibition to one another, then cease to have this relation to those of the other group, and it becomes possible for any two systems belonging to the two different groups to be simultaneously active; *i.e.*, there are in one brain the neural conditions of two streams of presentations passing through two foci of consciousness.

But although this current explanation of these cases is thus rendered more definite and very tempting by the adoption of the view of inhibition advocated above, I cannot regard the explanation as altogether satisfactory, because it assumes that the essential condition of the unity of individual consciousness is the spatial continuity of neural substance and neural process; and this assumption, although it has been made by authors so distinguished as Fechner<sup>1</sup> and von Hartmann,<sup>2</sup> besides many others, I find great difficulty in accepting for reasons briefly indicated elsewhere.<sup>3</sup>

<sup>1</sup> *Elemente d. Psycho-Physik.*      <sup>2</sup> *Philosophie d. Unbewussten.*

<sup>3</sup> "Proceedings of the Psychological Society," *British Journal of Psychology*, vol. i., part iii.

Of the factors of the attention-process enumerated in the first paper of this series three remain for brief consideration, namely, emotional interest, vascular changes and voluntary effort.

#### EMOTIONAL INTEREST.

When an object is of such a nature as to arouse emotion its perception involves the excitement of a neural system, a congenital disposition, which propagates its excitement to many organs, especially the visceral organs. The disturbances produced in these stimulate the afferent nerves of these organs and so through them send streams of energy back to the brain; and in virtue of visceral circuits, similar to the motor circuits described in the third paper of this series (vol. xii., p. 485), these afferent streams of energy return in the main to those neural systems from which issued the impulses that evoked them. They thus intensify the excitement of the system, and re-enforce that system in its rivalry with all others enabling it to inhibit them; hence by this circular activity which tends to be self-maintaining, like that in the motor circuits, the attention-process is intensified and kept playing about the one object or system of objects, and it is followed by all the effects of intense attention. In so far as emotional excitement operates in this way in re-enforcing the attention-process it must be classed with motor adjustments as one of the accessory internal conditions. These considerations render intelligible a certain rule which for many years I have observed with success when wishing to fall asleep. The rule is to turn away the attention from any train of ideas in which the idea of the self is likely to be involved, therefore from all familiar places, persons and things. For the rise to consciousness of the idea of self is almost always accompanied or followed by some degree of emotional excitement which suffuses the brain with free energy and so prevents that gradual quiescence of the brain which leads on to sleep.

#### VASCULAR CHANGES.

Many authors have regarded vascular changes as playing an important part in the fixation and remission of attention, and for some indeed no other factors seem to have come into view. I attach no importance to vascular changes in this connexion. If we could suppose that neurones were compact cells, that functional groups of neurones were compact groups and that each such group was supplied by a separate arteriole, then we might suppose that changes in the amount of blood

passing through such an arteriole (changes brought about by the products of metabolism of the neurones or by hitherto undiscovered vasomotor nerves) might play some part in the fixation or remission of attention. But the actual conditions are the extreme opposite of these, a single neurone is often inches or feet in length, and the neurones constituting a functional group or system are, probably in every case, intimately mingled and interwoven with thousands of others belonging to other systems, and the vascular supply of a single perceptual system must be drawn from hundreds or thousands of arterioles and capillaries widely separated in space, coming from many different arteries and supplying also parts of very many other neural systems.

#### VOLUNTARY EFFORT.

Without entering into the psychology of volition we may briefly consider the nature of its effects on the process of attention. "The volition to attend," says Stout, "is strictly analogous to the volition to move the arm, or perform any other bodily action. It follows from this that our voluntary command of attention must depend on our voluntary command of the motor processes of fixation."<sup>1</sup> And this voluntary control of the motor processes, together with a possible but highly improbable control of undiscovered vasomotor mechanisms in the brain, he regards as the only means of voluntary control of attention. I would accept unreservedly the statement of the first sentence quoted above. The second sentence states concisely a widely current doctrine which, I submit, has no logical foundation. It would seem that this doctrine owes its prevalence to that way of thinking which I have criticised above (p. 333); direct volitional control of motor innervation is accepted as an indisputable and familiar fact, the inexplicableness of which is obscured by its familiarity, while volitional control of any other kind of neural process is denied because of its inexplicableness. That Dr. Stout should have found himself compelled to invoke a purely mythical voluntary control of vascular changes in the brain should lead us to suspect that he has left out of account some important factor. I think we may safely go farther than the first of Dr. Stout's sentences quoted above, and may say that, not only is the volitional innervation of muscles strictly analogous to volitional attention, but that the former is merely a special case of the latter, that all volition works by way of concentration or intensi-

<sup>1</sup> *Analytic Psychology*, vol. i., p. 243.

fication of attention. For according to the acceptable doctrine of Prof. James<sup>1</sup> the idea or sensory representation of a movement is the immediate conscious antecedent of the movement, and it would appear that by volition we can but cause an idea of movement to realise itself, if the non-voluntarily arisen idea has failed to do so, or can cause an increase in the force of the muscular contractions if the idea of movement has realised itself non-voluntarily. How do we achieve this if not by a voluntary concentration of attention upon the idea of the movement? The neural effect of this voluntary concentration of attention can only be, in both cases, a fuller flow of energy from a system of neural elements which has been excited either through peripheral stimulation of its sensory extremities or through some association-path. In the case of willed movement the system constitutes at once the cortical 'centre' for the initiation of that movement and the kinæsthetic 'sensory centre' for the representation of the movement; in the other case it is a system whose excitement underlies the rise to consciousness of some sensory presentation or idea. Whatever may be the conditions of volition, this is its effect in the case of concentration of attention on the idea of movement, and familiarity should no more blind us to the inexplicable character of the effect than in the case of production of sensation by excitation of the elements of the sensory cortex.

There is then, I submit, no *a priori* ground for making this great difference between ideas of movement and other ideas; if volition can directly re-enforce the former class of ideas and if the neural effect is a fuller stream of energy issuing from the corresponding neural system, then we should be prepared to find that volition may have similar effects upon other ideas and upon the neural processes correlated with them.

Clearly, it is for those who put apart ideas of movement, or the processes of innervation of muscles, in a class by themselves to show cause for doing so, and I do not think that this has ever been done. On the other hand, the experiments reported in an earlier section of this paper (pp. 330 and 331) go some way to prove that we can exert direct voluntary control over both ideas and sensations, in the sense that we can, without muscular adjustment or innervation, directly favour one mode of perception as against others or the presence in consciousness of one quality of sensation.

It seems clear that, in the case of voluntary re-enforcement

<sup>1</sup> *Principles of Psychology*, vol. ii., p. 501.

of a muscular contraction, the essential effect is the issue of a fuller stream of energy from the system of cortical elements whose excitement initiates the movement and gives rise to the idea of the movement. And it seems probable that this fuller stream of energy is the result, not so much of a more active metabolism of the neurones of that neural system, but rather of a greater concentration of the free energy of all parts of the brain into those channels, into that system. For the degree of effect of this sort that can be achieved by voluntary effort depends upon the amount of that free energy present in the brain. Thus when I squeeze my dynamometer with maximal effort just after waking from a long sleep it registers only about 70 or 80 kilos., but if I repeat the effort a few minutes later after rising, going into the light and plunging into cold water, it registers about 120 kilos., a difference which implies a very great increase in the amount of energy discharged from the motor cortex. I suggest then that, while all attention involves concentration or convergence of free nervous energy from all or many parts of the brain into some one neural system, voluntary effort results in a further degree of this concentration of energy. I have tried to show how the concentration of energy of non-voluntary attention may be explained by purely physical principles, but I am not sure that my explanation completely accounts for it or that it can be completely accounted for on physical principles, and this is I think still more doubtful in the case of the higher degree of concentration that results from voluntary effort. It is here, if anywhere, that the interactionist must seek in the insufficiency of physical causes evidence of psychical efficiency; here possibly we have a residual effect which, as I suggested on an earlier page, may be evidence of psychical guidance of physical process. If such power of guidance of energy by psychical effort in however small degree be granted to the interactionist, he has all that is needed for his purposes. The world is then not purely mechanical, and biological evolution may be regarded as increasingly teleological, as swayed in an ever-increasing degree by final causes, and we may hopefully look forward to the time when man will control by voluntary effort the further evolution of his species.



#### IV.—THE FREEDOM OF THE TEACHER TO TEACH—RELIGION.

BY FOSTER WATSON.

I PLEAD that instead of shelving the religious problem in schools by effecting their secularisation, the religious problem should be boldly faced. I believe it will have to be faced in the future. For if you recall the names of the great educators you will find that religion in some form or other is behind their best efforts. Vittorino da Feltre in Italy, Dean Colet in England, Luther in Germany, Pestalozzi in Switzerland, to say nothing of such modern schoolmasters as Thomas Arnold and Edward Thring, would not have understood the meaning of education with religion left out. It is no answer to say that these chiefly were concerned with Secondary Schools, and the national problem to-day is with the Primary Schools. For, why should we not give of our best to the Primary Schools? It cannot be that religion is good for Arnold's Rugby and Thring's Uppingham, but bad for the Primary School. Indeed, it might rather be argued that since Primary Schools often include those children whose parents are less able or less inclined to give a religious training, the need for these children to have the best of religious training is all the greater.

I am attracted by the old Platonic *a priori* argument that all government exists for the interest of the weaker, and I propose now to present the case of religion in the school from this point of view. Plato, it will be remembered, in the *Republic*, urges that the statesman, in so far as he is a true craftsman in the art of government, will have no other interest to pursue than that of the development of the highest perfection of his art. He will not seek his own self-interest; still less will he seek to mix up his art with other aims than that of good government as such. He shows what the good governor is by an analogy with the good shepherd. The good shepherd does not fatten his sheep for his own advantage:—

The only concern of the shepherd's art is, How it shall procure what is best for *that*, of which it is the appointed guardian.



So the statesman's art looks solely to the advantage of those who are governed by it. The 'advantage' of the shepherd or the statesman constitutes another art, *viz.*, the art of wages—a very different thing, though often confused with the art itself. There is therefore an intrinsic interest in an art which solely regards the inner aims and development of that art; there are extrinsic interests—which regard other aims than those of the arts themselves—*viz.*, the welfare and personal success and reputation of the 'artist'—or his varied prejudices and opinions in connexion with other subjects. Finally, there are the prejudices and opinions of those outside of his art, who may bring pressure to bear upon him within his art.

Let us consider the case of those outside of an art who venture to interfere, directly or indirectly, with those inside it, and in doing so, let us still take Plato as guide. He tells us that those inside an art, those who have given their whole thought and concentration to the development of their art, are strictly kept within limits, which they dare not, and in so far as they are "artists," cannot transgress. They cannot, as he says, go "beyond" their art. They are permeated with its principles and scientific basis, and are therefore obliged to see all the subject-matter of their art in the light of these principles. There is a common fund or atmosphere of expert knowledge and experience which binds closely together all persons exercising the art. One musician will not "out-do" or "go beyond" another, as far as musical principles are concerned. In fact, all have to conform to the standard of ascertained musical knowledge. Whatever individual differences arise, the appeal has to be made to the court of established musical principles, and is instinctively so made by the musician who is trained in his art. But not so with the untrained outsider. His criticisms are founded on individual prejudices. He sees things, as Bacon would say, from a "den" of his own. So with the trained medical man. He is "limited" by his knowledge, skill, experience in medical principles and their known applications. Not so the outsider, the "quack". The "quack" can go so much further than the man who has studied closely the medical art. The "quack" knows no principles. His interest is extrinsic.

Now let us apply these Platonic conceptions to education. Education is an art—a difficult, complicated, technical art, which requires close concentration for the development of the best educational action, which requires energies similar to those required by the art of music and by the art of medicine. Education therefore has its "intrinsic" interest. For it, all

the topics which come to be considered by the follower of this art, must be studied with a view to being placed in their rightful position with regard to the main purpose and aim for which the art is instituted and followed. It is not only desirable, it is strictly essential, that the subject-matter of this art should be reviewed, and placed in its proper perspective, and be read off in the light of educational principles. The man who follows the art of education must recognise his "limits"—(they are those of the principles of education). He will not go beyond them, but on the other hand, he will be permeated through and through by them.

How about the outsider? Like the unmusical man or the non-medical man, in discussing the subject-matter of the arts of music or of medicine, he will not know the "limits". He will "go beyond" both the educationist and his fellow non-educationists. He is a "free lance". He will see everything from that "den" of his own, which may be dark and noisome, and yet he will not hesitate to try to impose his views on the man who follows the art of education, for he is unrestrained by knowledge, skill or experience in the educational art.

Which, then, is to be regarded as likelier, *prima facie*, to understand his work, the musician, the medical man, the educationist; or the non-musician, the non-medical man, the non-educationist? Briefly, when *education* is in question, who should determine the place of religion in educational training? Should we look to the man who has followed the art of education, or should we think the "outsider," who knows not the principles of the art, the likelier man?

We cannot better illustrate the likelihood that the educationist is, on the whole, the better judge of the educational problem involved than by taking the case of Plato himself. Plato found himself out of sympathy with the religious orthodoxy of his day. He is a severe critic of the conventional view of the gods as held by the Greeks. He is, it is true, an unsectarian, or undenominationalist. The stories of Uranus and Cronos are offensive. They must not be told to the young. "Nor is it proper to say that gods wage war against gods, and intrigue and fight amongst themselves; that is, if the future guardians of our state are to deem it a most disgraceful thing to quarrel lightly with one another." Plato protested that children must not be told the stories of the chaining of Hera by her son, and the flinging of Hephaestus out of heaven for trying to take his mother's part when his father was beating her. It was urged in justification of the teaching of these stories by contemporaries that

these stories were allegories, and could be interpreted. It was asked: May not the stories covered by the honoured names of Hesiod and Homer be communicated to the young? Plato's answer is, No. We see the *educational* quality of his mind in the reason which he gives:—

A child cannot discriminate between what is allegory and what is not; and whatever at that age is adopted as a matter of belief, has a tendency to become fixed and indelible; and, therefore, perhaps, we ought to esteem it of the greatest importance that the stories which children first hear should be adapted in the most perfect manner to the promotion of virtue.

The modern Christian disapproves of the ordinary conception of religion which Plato combated, but many nowadays would suggest, judging from their attitude in questions of the day, that, in the circumstances, Plato ought to have advocated education with religion left out. But Plato thought education included a satisfaction of the highest needs of the child's nature as well as the lower needs. He—no man more—would urge that knowledge should grow from more to more, but also desired that more of reverence should prevail, especially in the school teaching. His remedy was not secularisation of the schools—but the *enunciation of educational canons for the religion that should be taught to children*. He demanded:—

1. That God should never be spoken of in any sense inconsistent with the essence of goodness,—and
2. That gods must never be represented as whimsical, fickle, or given to falsehood in any shape.

Teaching opposed to these canons, however supported by the authority of poets or priests, is, in his view, degrading and uneducational. When a poet uses language inconsistent with these canons, Plato stipulates that we should not allow our teachers to adopt his writings for the instruction of the young, if we would have them to grow up “to be as godlike and God-fearing as it is possible for man to be”.

Plato, of course, makes short work of the difficulties of securing such teaching. He urges that censors should be appointed to supervise all that is to be taught to the young. Such a method would appear to be a State Regulation of religious teaching. But there can be no doubt that had Plato stated who were to be the censors—they would not have been the representatives of the poets, priests, or even of the people. They would, in all probability, to use modern terms, have been those experienced in educational discipline, in the study of the reactions and effects upon the growing

mind of the sort of subject-matter in instruction of all kinds, including in their reflective outlook religious as well as all other provinces of knowledge, thought and practice which are suitable for the child-mind at its various stages.

But the point I wish to emphasise is that the case of Plato shows that one of the greatest philosophers of all time, in seeing around him the prevalence of religious ideas with which he is entirely out of sympathy, does not come to the conclusion that religion is not to remain an educational discipline, but demands that its place in education shall be determined by its educational significance and in accordance with educational canons. No doubt the Athenians, with their differences of view in the authority to be attached to poets and priests on religious matters, could have suggested that, for the sake of peace, religious teaching should have been dropped. But Plato held that religion had a rightful place in education, and he proceeded to show by *educational standards* the kind of religion that was desirable to compass the educational end. I suggest that Plato as an educationist showed that education was capable of supplying standards for judgment as to the place of religion in the mental development of the child, far in advance of the religious public of his time and with light for an age.

I am not contending that Plato's educational canons are the only or the highest canons for religious teaching to-day. Their virtue consists in their realisation of the educational idea involved in school teaching of religion and their recognition of religious teaching as an integral part of the educational process.

We have seen that he who practises an art must consider the interest of that of which the art undertakes the direction. The governor must govern for the good of the governed; the shepherd for the good of the sheep. So the educator must consider the interest of the pupil. The teacher is relatively to education, the stronger; the pupil, the weaker. Now if the teacher teaches religion—the whole point of Plato's contention is that the religion taught must be suitable to the child's stages of development. Nothing must be taught which will not serve as a basis for further developments later on, but at the same time the subject-matter at each stage must be suitable to the child's capacity. We may go a step further and say that religion (as indeed all subjects of instruction) is not to be taught from the teacher's standpoint, but so as to help the child to observe, to think and to feel as well and as capably on religious matters as in other directions of study.

What place in school education, then, will the religious needs of the child hold? Well, let us clear away one misconception. They will not be the same as those of the man. Science instruction for the child, history instruction for the child, literature instruction, physical instruction, are all different from those for the adult student. Who can tell us what is likely to be of service to him in science, in history, in literature—and in religion? Those, I answer, who have most studied the child's nature, those who have lived with him, those who have tested the reactions of the different kinds of instruction in the mental growth. This is the life-study of the educationist. The man in the street, the man on the County Council, sitting in Committee, or the Board of Education may frame syllabuses of topics; but these "Authorities," as they are ambiguously called, know not what they do. They impose their manhood's view upon the child and the teacher. But a more important question is: What does the educationist say? Is it not time an appeal was made to him? The educator, indeed, distrusts syllabuses laid down by codes for all schools alike in any subject of instruction. In all subjects of school instruction he believes (contrary to the man on the County Council) that it is of comparatively slight importance *what* is taught. The essential point is *how* the teacher teaches what he attempts to teach. The educationist would tell us that the teacher who wishes to teach science will desire to get the basis of a scientific method of observation and way of thinking rather than be concerned with the *amount* of examinable material forthcoming in the child's memory. So the teacher of history should wish to bring about something of the touch of sympathy with great men and great deeds—and the basis of a humanistic training. The teacher of literature should desire to implant the love of exact expression and of noble thought—rather than so many poems learnt by heart, so many obsolete words known, or so many emendations of the text got up from a learned editor—of a poet's works. So with the teaching of religion. The teacher of religion is concerned with the desire to implant the idea of truth, sincerity, of human helpfulness. He is dealing with humanism, and this surely includes in the opinion of most the upward glance towards the universal, the infinite, towards Goodness and Perfection. He must be aware of his responsibility in dealing with the highest things, not only because of the reaction upon himself of the spirit in which he deals with them, but also because of the momentous influence which, if he is not exercising it for good, is being converted

into harm. He does not scout the idea of a religious atmosphere. Plato adumbrated one. Arnold created one, and so Pestalozzi. The atmosphere of reverence is all too rare in the school. It is not less of it that the educationist would wish to see; it is rather more—and purer.

But the "outsider," the "many-headed" people, fear indoctrination into dogma. If they can, through their representatives, limit the teacher to a certain syllabus, are we not safe from dogma in the school? No. If religion is to be taught in the schools, most people would include in the syllabus the Lord's Prayer. Surely that, if anything, is safe from the dogmatist. Yet I once knew a teacher who expounded the first two words of the Lord's Prayer, "Our Father," and told his class to underline the word "our". He observed that "*our*" included all men, and therefore Christ—and since Christ was included, indirectly and implicitly, in using the Lord's Prayer we pleaded His sacrificial merits. There was a dogmatist run wild in the class-room. But he was not an educationist.

As we have seen, Plato would say that he who pursues the art of education, must be an educationist. Here, I believe, is the line of direction for us to take. We must not exclude religion from the field of the school disciplines because our teachers sometimes are not educationists; rather, seeing the unspeakable significance of the art of education, instead of excluding religion, we must see to it that those to whom we commit the work of education in that subject and in all subjects are educationists. The perverted ingenuity of the dogmatist who is capable of pleading Christ's sacrificial merits through the words "Our Father," is just as harmful in other regions of intellectual and moral teaching as in the teaching of religion. The art of education would require him to consider the interest of his pupils whilst he is not only living in a den of his own, but what Plato would regard as far more serious, he does not know that he is blinded. He does not know the "limits" of his art, and so whilst he is professing to follow the art, he is, in truth, an "outsider".

The remedy I suggest is that as a nation we should see to it that those who follow the art of education should be educationists. The pursuit of an art may create artists or artisans. It is comparatively easy to be an artisan teacher. All a man needs is a certain amount of knowledge of technical rules, a list of rules and regulations, full syllabuses to which he is to adhere—and a set of inspectors to keep him up to the letter of official instructions. Such a teacher is

easy to direct. But not so the artist. "It takes a soul to move a body." The artist must have knowledge—and *inspiration*. He must be a cultured personality. The artist-teacher, *i.e.* the educationist, must have a world of sympathetic imagination joined with a well-equipped and disciplined intellect. He must believe in the work of teaching as one of the most interesting and urgent of humanistic functions in the commonwealth. He must care for the intellectual and moral development of his pupils more than for his particular views or predilections in all subjects. It is the mental activity of his pupils with which he is concerned, which he wishes to help—not the propaganda of any sectional views of his own either in science, history, or—religion. *This is simply what is meant by being an educationist-teacher.*

It is reasonable to demand that all teachers shall be educationists. What is necessary for the accomplishment of such a desirable result, is that the country should be prepared to pay the price—necessary to draw men of a sufficient mental and social power into this great work.

"But we cannot trust the teachers in so important a matter as religion." No. That is the root of the matter. The subjects of the curriculum, the syllabus of the subjects, must be drawn up—or controlled by local Education Committees acting under their officials, who may never have taught in a school. The work of teaching must be inspected by Inspectors who may never have taught in a school, or be examined by examiners who have perhaps never entrusted themselves with a class of children in their lives before they took up their present occupation of inspecting or examining. It would accordingly seem that teachers cannot indeed be trusted in the larger or even in the smaller matters of their craft though their overseers are certain to have clear insight. Supposing we said: Doctors cannot be trusted in matters of life and death. Indeed, in the smaller matters of their art, they ought to be supervised—for it is of importance to the commonwealth that people's bodies should be carefully dealt with when out of order. Supposing at critical moments medical Inspectors, without medical experience, came on the scene, on surprise visits, would such action give fair play to the physician who had made his diagnosis, and carefully considered the previous history of his patient? The wonder is, that the teachers have accomplished so much under such a system. For like the artisans, whom the system forces them to resemble, they are supervised by their Foreman, called the Inspector, though unlike the manual artisan, without having the security of the ordinary



artisans that the foreman is himself an experienced craftsman. It is little wonder that teachers cannot be trusted with religious teaching whilst there is the tradition against them of being suspect craftsmen. Of course, things are altering for the better, and we gratefully acknowledge this, but the teacher has the suspicion about him that he is not to be trusted.

I contend that the educationist-teacher is to be trusted in the same way as the medical attendant. The educationist-teacher is to the school what the Professor is to the University. If he is an efficient man, he is entitled to the same freedom. If he is not efficient, he ought not to be in the school. It is thought by some that religion is too sacred to be committed to the treatment of any teachers. Of course it is if they are suspect craftsmen only. We should not entrust our bodies to the care of medical men if we regarded them as mechanics. It is quite right also not to wish to entrust children to religious teaching from the mere teacher-mechanic. But why should we not require our teachers to be educators? Is religion too sacred to be inculcated by the artist-teacher? If the musician finds sacred music fit province for his art; if the architect finds ecclesiastical art as a legitimate province; if the painter paints sacred subjects, and brings his help to the religious spirit—why should not the artist-teacher, the real educator, effectively and helpfully include religion as one of the factors in the development of the character of his pupils?

For the province of the educator-teacher, I take it, is the development of character, by intellectual, emotional and volitional process wherein all subjects of instruction are but the material, out of which process is to mature. The only possible way that I can see to exclude religion from the teacher's province is to say boldly that religion has no place in the formation of character. If directions are given by Education Authorities, the artisan-teacher will do all to order, but the artist-teacher can no more exclude the religious spirit from his teaching even if ordered, than artist-painters like Raphael or Watts could submit to give up painting their ideals so as to accept commissions for designing shop fronts or publicans' signboards. Those who follow education as an art—in Plato's sense—hold that character-development is the real end of education—the development of a "good"-will, as Kant and the Herbartians say, or "self-realisation," as the Hegelians put it. This implies that the school is not merely a place for knowledge-grinding. It should in its degree represent the *search for truth* as the basis of knowledge.



But more than this, the school should seek to cultivate the human sympathies. Herbart, the writer to whom especially educationists of to-day refer, declares that the sympathies, on analysis, concern themselves with humanity, with society and the relation of both of these to the Highest Being. If the cultivation of these sympathies be neglected, then there is a moral atrophy which is a distinct loss to the individual and to the community.

The educationist, be it noted, does not suggest that either knowledge or large human sympathies are "imparted" from without. Education is not something conveyed from the teacher to the pupil. Religious education, for instance, is not the instilling of the teacher's dogmas or tenets *into* the pupil. Every educationist thinks the important matter is the manifestation of the boy's mind in his thoughts, words and actions, and the growing increase in wisdom of them. Jesus, the great Teacher, said it is not that "which goeth in . . . that defileth a man, but that which cometh out". So in education it is the active energy of the mind of the pupil bringing itself to bear on the universe in which he finds himself which needs stimulation and help to reach out for himself into the intellectual, moral and volitional.

Let me state the general principles of religious teaching which educationally are acceptable. Let the teacher keep to the highways of humanism. Teach the important points of morals and religion which have an illuminative bearing upon conduct and life. Do not be didactic; let all so-called maxims or morals arise indirectly. Bring the human side well out in all the material of instruction used—Scripture or other books. Let the spirit of truth meet the spirit of reverence. As far as possible induce the pupils to think for themselves, and encourage them to express their thoughts. Readily accept the statement of their opinion—and help them to be sincere—even if their ideas be crude. If crude, help them to refine. Inculcate, above all, reverence for personality—for this is the basis of both the human and the divine idea, and at the root of it is—will. Always acknowledge with a spirit of gratitude—the 'good'-will—as seen in history, in literature, in Scripture. In matters of the State, teach, as T. H. Green has shown, the very basis of the state is not force, but will. The 'good'-will is to be revered as the expression of the right-minded man and the right-minded community. It is, moreover, of importance to reverence 'good'-will, even where we differ from its form of manifestation. For example, in the last generation, Darwin was spoken of as an atheist and infidel. His theory of evo-

lution was described as untrue because of its conflict with early scriptural treatment of the creation. The doctrine of the ascent of man from low origin was stigmatised as impious. Now, the school-teacher cannot settle controversial, religious and scientific questions. But he can himself show his reverence for all sincere effort of will in the search for settlement. To do this, it is necessary for the educationist-teacher to have freedom to emphasise this aspect, and it is the business of religious training to present a fearless and encouraging attitude to all real effort to find truth in every direction. Even in the case of Dr. Colenso, had any occasion arisen for referring to it, the schoolmaster might reasonably have claimed the right to stand unmoved before his boys in the 'shameful panic' (as Dr. Hunter recently described the attitude of the religious world towards that Christian critic of the Bible); not that he should have necessarily accepted his views—but on account of Colenso's call for justice to the native tribes, and the great Bishop's 'passion for truth' and readiness to take pains in the search for it. Those were positive merits of personality and deserved a recognition which they did not always receive. Such teaching of respect for the search for truth is from its nature selective. If it can be correlated with other work, such as history or literature, so much the better. Religious instruction is not merely biblical instruction. I cannot think that any teacher would wish to omit from his teaching the Lord's Prayer, the Beatitudes, the Parable of the Good Samaritan, and the Prodigal Son—and the main incidents in the life of Jesus. Whatever is done in early teaching of religion, it is clear that biographical and concrete forms are usually preferable to any abstract statement of systematic truth. Also, in choice of lessons, it is well to remember that so much in the Bible is beautiful as literature, that such passages as the teacher feels especially to rest lingeringly in his memory he will naturally wish to bring before his class, not authoritatively, but suggestively. Another good method is to let the class themselves choose what they would like as a lesson, if necessary describing beforehand several topics in a general way, so that they can judge as to the likelihood of interest. I claim freedom for the teacher, to choose what he will teach as freely as the topics in the history lesson. As an example, however, I may say with my own boys when I was a school-teacher I never tired of bringing before the boys the twenty-eighth chapter of Job, on the pricelessness of wisdom—one of the matchless pieces of translated literature in the English Bible.

Nor is it necessary for the teacher to confine himself to

the Bible. One passage which I liked to read with my boys and to talk with them about I took from that great man Jeremy Taylor, at the close of his *Liberty of Prophesying* :—

When Abraham sat at his tent door according to his custom, waiting to entertain strangers, he espied an old man stooping and leaning on his staff, weary with age and travel, coming towards him, who was an hundred years of age; he received him kindly, washed his feet, provided supper, and caused him to sit down; but observing that the old man ate and prayed not, nor begged for a blessing on his meat, asked him, why he did not worship the God of heaven? The old man told him that he worshipped the fire only, and acknowledged no other God; at which answer Abraham grew so jealously angry, that he thrust the old man out of his tent, and exposed him to all the evils of the night and an unguarded condition. When the old man was gone, God called to Abraham, and asked him where the stranger was? He replied, I thrust him away because he did not worship thee: God answered him, I have suffered him these hundred years, although he dishonoured me, and couldst thou not endure him one night, when he gave thee no trouble? Upon this saith the story, Abraham fetched him back again, and gave him hospitable entertainment, and wise instruction. 'Go thou and do likewise,' and thy charity will be rewarded by the God of Abraham.

From such a passage can be gathered what I mean by making the religious teaching selective, and keeping to the high-roads of humanism. There are, moreover, "occasional" lessons which may be of great value. For instance, one of the most impressive religious addresses I remember was an academic address to students gathered together on the occasion of the death of Queen Victoria. This was in a College, but it would have been as fitting in a school.

Systematic theological instruction is a much more difficult matter. It involves so many qualifications, so much knowledge in the teacher, that only few could give it adequately, and after careful training in modern critical methods. As for denominational theological teaching, it is surely sufficient to say that with so many different sects the particular dogmas of each are as indifferent to the educational teacher, and as far apart from his teaching work, as, say, the squaring of the circle to the teacher of mathematics, or the puzzle of perpetual motion to the teacher of mechanics. They are obviously *unsuitable teaching material for the child stage*.

The fact is that the idea of an educationist-teacher is not conceivable easily by the public mind. The idea of a profession of teachers with any inner sense of responsibility, by which they are self-restrained from abusing their position, is as little understood as that of a lawyer who is more anxious for justice than for his own self-interest, or a doctor who cares more for his patient's recovery than for his fees.

Yet I venture to suggest that the recognition of the

freedom of the teacher combined with the promotion from within of a sense of professional responsibility not to abuse his position by presentation of specialistic denominational views, is the way of solution of the religious problem in the schools. The educational teacher knows :—

Our little systems have their day,  
They have their day and cease to be ;  
They are but broken lights of Thee,  
And Thou, O Lord, art more than they.

As a matter of fact, the child needs protection ordinarily far more from the parents and the Sunday school teacher than from the day school teacher. For these, I venture to say, also have no "right" educationally to attempt to control the child's intellect by cultivating in the child a "twist" in some denominational direction. They, too, ought to consider the real intellectual, moral, volitional good of the child, but too often they have not even considered the "interest" of the child, nor have they accommodated themselves to his outlook on the world and the universe. They have not attempted to build up and develop what is already there, but to bring a system of doctrines *ab extra*, and mechanically to superimpose them on his *corpus vile* or perhaps on his *animum purum*. The self-activity of the child-mind should be helped by parent and by teacher to its own desire and search for truth in all directions—not least in religion.

There is one other safeguard against denominationalism—*viz.*, the nature of the child. Complex, abstract, generalised dogma is unsuitable to the child-mind. This may not be recognised by those "outside" the art of the teacher, but it forces itself upon the conviction of the educator-teacher. Any one who will read Dr. James Sully's section on the "Theological Ideas of Children" in his *Studies of Childhood*, pp. 120-33, will see that the attempt to indoctrinate is a grotesque failure. Now, of all people, it is the business of the teacher to know this fact, and hence the best safeguard against such teaching is the sound training of the teacher in the limits of his art, and complete freedom to do his best for the child in the whole problem of character-building.

An emphatic protest ought to be made against the idea that the day school must be reserved for secular teaching and the Sunday school for the religious teaching. The suggestion is an intelligible logical consequence of the specialisation of functions in our time. But the idea in essence amounts to this : that the Sunday school is another of the long list of technical schools of our times, and the possibility

is presented that it, too, as so many technical institutes, will be severed from any broad humanism. But apart from this is the danger that the child receives the impression that religion is for the first day, and secularism for the remaining six. Let us recall the powerful words of Dr. Martineau:—

We are not made upon the pattern—to be children of nature at ten or eleven and children of grace at four; nor is religion a separate business, a branch of study, a program lesson, that can be emptied out into an hour; but a life of every time, a spirit of all work, a secret wonder in the thought, a manly duty in the will, a noble sweetness in the temper, which spreads from the eye of an earnest teacher, though seldom coming from his lips: but which would cease to burn in his silent looks, were these not sacred things represented by him, of which at any moment he might speak.

With these words before us, let us pause before we say we want the secularisation of the schools without any qualification. Finally, let it be remembered as a matter for wonder and concern that in the conflict of sects and denominations it is not the teachers who have asked to be relieved from religious teaching. On the other hand, it is largely religious people "outside" the art of education who are dictating to the whole body of teachers that the latter are to exercise the self-denying ordinance of severing all religious implications from the school in obedience to a political dogma of secularisation of the schools. Let it be remembered a teacher may have, and the best teachers will always have, a *pedagogical conscience*. If so—Must the pedagogical conscience of the teachers necessarily give way to the political consciences of outsiders? Should not teachers be consulted on a question which concerns their own art? Plato would say that those who pursue the art ought to be both consulted and followed. But the teacher is a paid servant of the local Education Authority. It is a serious national question whether he is to be treated by those Authorities as a mechanic or as a master of the art of education. St. Ambrose is credited with saying: "The civil authority has no right to interdict the liberty of speaking, nor the sacerdotal to prevent speaking what you think". The secularisation of the schools is a political call of expediency. What has that really to do with the educative process? What we really want is the broadest and highest humanism in the schools. It is rightly considered for those who pursue the art of education to determine what is necessary to the complete concept of education. Even the Board of Education is beginning to think that probably the teachers might be permitted to have a part in the examination of their own classes. But the question before

us is even more vital. Should not teachers have a part in deciding whether secularisation of the schools is compatible with the full humanistic concept of education? May they be free to teach of their best and highest in all subjects—*except one*? The teaching of religion in the schools is a difficult one, but its scope and limits and methods can, in my opinion, never be settled satisfactorily without consultation of those whose life-study is the art of education.

## V.—DISCUSSIONS.

### PRAGMATISM AND PSEUDO-PRAGMATISM.

PROF. TAYLOR's rejoinder (in N.S., 57) to my criticism (in N.S., 54 and 55) of some of his recent utterances is so interesting and relevant that it is a real pleasure to reply to it. It has however two sides. The first will doubtless have been welcomed by all interested in the questions of the hour as throwing a great deal of light on several of the darkest corners of the pragmatic controversy, and as contributing the most lucid statement of some intellectualist objections the exact meaning of which has long been a puzzle to all of us, in short as eminently calculated to dispel much of the fog which has hitherto enveloped the real issue. Personally I feel that I now know almost exactly where Prof. Taylor stands, and though he has not come out quite where I expected, I am abundantly grateful to him for clearing up the situation. I can only hope that if I reciprocate in a similar spirit of frankness, he will be able to say the same for me and that the fog will then be wholly gone.

The other side of Prof. Taylor's article consists of personal grievances and accusations against me, concerning which he seems to me to have said rather more than was either just or necessary. I shall however refer to these as lightly as possible, partly because of my gratitude for the enlightenment aforesaid, partly because I was provoked to give him the annoyance of looking up a good many references (whereof one was I grieve to say misprinted), for which allowance must be made, and, lastly, because it is a waste of time to bandy words with an opponent willing to argue honestly.

Prof. Taylor's main grievance is that he should have been suspected of syncretism, *i.e.* of attempting to graft on his old stock of absolutism doctrines springing from much younger roots: but I am at a loss to apprehend why he should take this as an insult. I can well conceive, and readily pardon, an absolutist philosopher ransacking all markets in his desire to enrich the barren doctrine that the Absolute is absolute. And though in this case the rival views look in some lights incongruous enough, I dare not (as yet) affirm it impossible for a philosopher, who fully realised the weakness of the absolutist and the strength of the humanist position in certain respects, to succeed in combining them. There was there-

fore nothing antecedently preposterous in supposing Prof. Taylor to have made this attempt. Besides both before and since he has given marked proof of a susceptible and syncretist temperament.<sup>1</sup> To take therefore Prof. Taylor's language (of which I gave a representative, though not an exhaustive selection) as aiming at such syncretism was exceedingly natural. It was in fact so taken in several quarters, and the mistake, such as it was, was not mine alone nor in the first instance. My own attention indeed was first called to the matter by an approving friend, and it was because of the marked similarity between Prof. Taylor's language and ours that I was moved to scrutinise his book so closely. As a result I was puzzled. Many of Prof. Taylor's utterances were distinctly what one may call 'pragmaticoid,' but it seemed on the whole more probable than their pragmatism was not genuine. Still it required very close reading to perceive that he could not mean what he seemed to say. And even when subsequently he came forward as the champion of intellectualism in the *McGill University Magazine* and the *Philosophical Review* a doubt remained.

In view of this difficulty and of the fact that Prof. Taylor was still happily alive to be questioned, I thought it best to challenge him by inquiring point-blank what he had meant. The success of this challenge is attested by the explicitness of his reply. It entirely removes all doubt as to what, psychologically, Prof. Taylor means. He does not mean to be a pragmatist, and if he has talked pragmatism it has been as M. Jourdain talked prose. But it does not follow that he did not talk it, and that his explanations are as good for others as for himself, and have succeeded in rendering his system logically coherent. The syncretism has not been eliminated but confessed, and it seems to be more deeply rooted in its structure than even now he realises. I am willing indeed to admit that this syncretism is somewhat different in kind from what I supposed. But I am now quite convinced that my criticism was justified both by the admitted laxity of Prof. Taylor's language and the grave tactical error of using 'pragmaticoid' phrases without warning the reader that they did not mean what they might very reasonably be taken to mean.

### I.

I proceed to consider Prof. Taylor's explanations of the incriminated doctrines in detail. They were, he assures us, derived from

<sup>1</sup> Most recently *e.g.* in adopting the language, and on many important questions the views, of Mr. Russell's symbolic logic. And in one desirous of remaining an intellectualist this is doubtless wise. For though this latest of philosophic developments departs from absolutist 'orthodoxy' quite as far as Humanism, albeit in a diametrically opposite direction, and will, when fully constructed, probably be found to be just as incompatible with it, it appears to be intellectualist to the core, and at least avoids the confusion of logical with psychological considerations which vitiates the traditional 'logic'.



a variety of sources, and that they converged in the same direction was a coincidence; the case against them was based on 'misapprehensions' or 'commonplaces of philosophic thought'.

(1) Among the latter he reckons his constant use of purpose and teleology, seeing that the 'categories' of end and purpose go back to Plato, Aristotle and Leibniz, all of whom he regards as absolutists.<sup>1</sup>

Now I am quite willing to believe that historically these categories entered Prof. Taylor's mind from the study of Plato and Aristotle, and that he is indebted for their application to Profs. Ward and Royce. But this explanation hardly seems logically sufficient seeing that (1) much prominence has been given to the definition of pragmatism as 'a thorough-going recognition of the influence of the purposiveness of thought on all our cognitive activities'; (2) that this was emphasised just because current absolutism has tried to ignore a feature so inconvenient to itself; and (3) that he had himself been expressly challenged to show how an Absolute could have a purpose. Or can it really be that Prof. Taylor has not yet become aware that there is a difficulty here, a difficulty, that is, in conceiving an Absolute, which is really absolute, *i.e.* a Whole which is complete, possessed by a purpose of completing itself?<sup>2</sup>

I hope therefore it will not be thought churlish of me to say that what was wanted was not an account of whence Prof. Taylor took his ideas on the matter, but a proof of their logical congruity with his absolutism. And no appeal to Messrs. Ward and Royce (and still less to the ancients) avails him here. Indeed it seems

<sup>1</sup> I cannot imagine why Prof. Taylor should attribute to me an insane desire to "put Plato, Aristotle and Leibniz under a ban". I have often expressed the greatest admiration for them all. They were all intellectualists no doubt, in some respects, but not one of them can properly be called an absolutist. Leibniz was (predominantly) a pluralist, Plato and Aristotle were both dualists, as even Dr. Caird reluctantly admits. Moreover, Aristotle's account of the practical reason (*φρόνησις*) is pure pragmatism, while Plato's Idea of Good verbally and in meaning coincides with the definition of pragmatism quoted above. As regards this particular question, moreover, they both had a perfect right to be teleologists, seeing that neither of them identified the good with the All, and that this identification is just the great moral and metaphysical stumbling-block in the way of absolutism. I can only suppose therefore that Prof. Taylor is not referring to the historic doctrines of these thinkers at all, but to some strangely mutilated form thereof which he has seen exhibited in some of his "Anglo-Hegelian lecture-rooms".

<sup>2</sup> Prof. Bosanquet apparently prefers to fling himself upon the other horn of the dilemma. He conceives the Whole as in 'change or progress' and therefore in 'time' (N.S., 57, p. 10). But the result is merely to attribute to the Absolute (with Lotze) a causeless and meaningless instability (*cf. Humanism*, pp. 73-75, 78). The mischief lies far deeper. The recognition of ends and purposes always rests ultimately upon selection of some kind. But the Absolute or Whole stands for a principle not of selection but of all-inclusiveness. It cannot therefore be credited with selective emphasis on any of its 'parts'.

queer to apply to those eminent writers for a guarantee of a Bradleian metaphysic, seeing that both of them have published searching criticisms of *Appearance and Reality*, and that it is quite easy, and even necessary, to understand and develop the doctrines of both in a pragmatist way.

(2) Prof. Taylor assures us that it is a misapprehension to regard his phrase about 'the instinctive demand of the intellect' as an approximation to our views. It was prompted by an aphorism of Aristotle's and a jest of Mr. Bradley's.<sup>1</sup> I fully believe it. But here again the question is as to the justification. For what business have 'instincts' and 'demands' in what professes to be a pure rationalism? The addition "of the intellect" no doubt makes a difference. But, I should have thought, *for the worse*. For if 'instincts' and 'demands' penetrate into the very intellect, does not this go far to prove our contention that the intellect itself is not 'purely' intellectual? And of course nothing I said ever implied that I regarded this single remark as 'committing' Prof. Taylor to the whole pragmatic doctrine.

(3) As regards the admission of postulates into science Prof. Taylor's explanation seems to read a little lamely. He mentions no sources for his inspiration, but excuses himself for ascribing a postulational structure to science on the ground that no one could help seeing it. I could applaud the sentiment without reserve, did I not remember how very recent the discovery is, and how long the principles of all the sciences were all supposed to be 'axiomatic' truths. And even now it is incomplete. Prof. Taylor himself retains 'axioms' in metaphysics, although (as I have shown and as he has not attempted to dispute) he gives no clear account of what they are, how they are to be known and how they are to be distinguished from postulates. He merely appeals to the very deceptive (and entirely psychological) test of 'self-evidence'. He likewise excepts from the general procedure of the sciences the single science of arithmetic, in which he is confident that no postulates can be found. Thus arithmetic, in spite of its scientific isolation, appears to be "the one pinpoint of the truth" upon which, more heroically though more painfully than St. Simeon Stylites, Prof. Taylor once peroratingly declared himself willing to take his lifelong stand.<sup>2</sup>

Now he had said all this before,<sup>3</sup> and I had duly noted it. But unfortunately the nature of arithmetical assumptions is too large a subject to be discussed on this occasion. It may however give Prof. Taylor some suspicion of the real complexity of these alleged

<sup>1</sup> For presumably no one would be willing seriously to describe *his own* metaphysic as "the finding of bad reasons for what one believes upon instinct". Before evolving a serious doctrine out of it Prof. Taylor should have reflected that the brilliant epigrams of which it forms one must have been put into the preface of *Appearance and Reality* because they would not have fitted into the text.

<sup>2</sup> *McGill University Magazine*, p. 66.      <sup>3</sup> *L. c.*, p. 55.

'axioms' to inform him that in lecturing on this subject I find it necessary to distinguish under *eight* heads the elements in them which rest on postulation, and under *five* those which depend on sheer empirical fact! For the most purely rational of sciences that is not a bad showing!

Even apart from such debatable matters I am surprised that Prof. Taylor should be content to accept the situation as he conceives it, to accept, that is, the postulatory procedure of nearly all the sciences as sheer fact, deserving of no special comment and possessing no significance for his theory of knowledge. If mine had got itself analogously entangled with an alien principle, I should have felt very uncomfortable, especially if I were also aware that the whole of the evidence to which I had pinned my faith was disputed by my opponents.

(4) Prof. Taylor assures me that he meant nothing pragmatic in speaking of thought as an instrument and of the intellect as an "intermediary between a lower and a higher level of immediate apprehension," and thinks that the context should have made this plain to me. Contexts notoriously are difficult things to allow for. However, in the first case I am quite willing to accept the interpretation of his context which Prof. Taylor now gives. The whole argument, he says, was an "objection to the attempt to study the knowing faculty apart from the actual contents of knowledge".

This is excellent, and even more to my liking than his original statement. For it exactly expresses our objection to the intellectualist severing of logic from psychology. But it seems inconsistent with Prof. Taylor's attitude on page 84, where he would admit no connexion between logical consequences and actual inferences.<sup>1</sup> And it seems to square ill with Prof. Taylor's conception of metaphysics as an '*independent*' inquiry into the general nature of reality, which is unaffected by the results of the sciences.<sup>2</sup> For do not those who thus conceive it attempt to enunciate general truths "apart from the actual contents of knowledge"? I cannot therefore but adhere to my previous conviction that, even though psychologically Prof. Taylor did not realise the scope of what he said, his remark remains connected with the instrumentalism of Prof. Dewey, and the humanist doctrine of the teleological nature of concepts, which was enunciated by Prof. James so long ago as 1879.

With regard to the intermediary function of thought on the other hand I appear to have in a manner misunderstood Prof. Taylor. I took him to refer to the fact (which well illustrates the purposiveness of thought and has an important bearing on the relation of intellection to perception), that judgment enriches perception and that mediate processes of cognition are ever returning to the immediate form, to which I had myself referred in

<sup>1</sup> Cp. a similar argument in *Phil. Rev.*, xiv., 265-288, and below, p. 389.

<sup>2</sup> Cp. *Ele. of Met.*, first and last chapters.

*Humanism*, page 199, and which I have now discussed further in the *Journal of Philosophy*, iii., 9. I had, of course, stripped off the mystical language and the reference to the Absolute in order to get at the scientific meaning of Prof. Taylor's remark, but if he considers these essential, I have nothing more to say to it.

I am glad that Prof. Taylor has taken the opportunity of explaining to what extent and in what sense he regards identity as postulatory, even though that sense seems to be nugatory. For his treatment of this point in his book seemed to be so obscure that I did not feel at all sure about it, and I therefore only referred to it lightly in passing. I must still maintain however that, but for Prof. Taylor's assurances as to his actual state of mind, no one could do otherwise than regard the passage I quoted (p. 354) as clearly subordinating the fundamental conception of the intellect called 'identity' to practical purposes. In the 'physical order' at all events it asserts that identity is not 'found' but 'made' or 'taken,' and it plainly renders the 'purpose' which 'identifies' the condition of the 'identity's' existence.

Elsewhere Prof. Taylor goes further and roundly asserts that "all identity appears in the end to be teleological" (*Ele. of Met.*, p. 335); I thought it safer therefore to credit him with more insight into the real nature of this 'axiom' than he now confesses to. I am sorry that Prof. Taylor declines to recognise its complexity, but possibly the reason is that he has so completely misunderstood my attempt to analyse its structure as actually to attribute to me the view that *all* 'identity' is a matter of postulation.<sup>1</sup>

What is even more regrettable perhaps is that if he had not disclaimed my interpretation, his philosophy would have been relieved of awkward questions such as these. How, if we only 'recognise an identity which already exists,' can postulation be said to come in at all and in any sense? What are (human) 'purposes' doing in face of an unalterable order of absolute fact? How does such fact 'call for recognition'? And why does it need to *call*? And if it is not true that we run the risk of calling things *the same* because they look *similar*, and only call them the same when they look the same, will not our reasoning speedily come to a stop? And has not the logical axiom thereby been reduced to a psychological accident? And can an intellectualist logic consistently regard a psychological incapacity to discriminate as a legitimate basis for an 'axiom'?

If Prof. Taylor will try to answer these questions for himself, I should not wonder if he came away with a deeper insight into the function of human cognition in apprehending 'independent' fact and 'absolute' truth than any which intellectualism has as yet vouchsafed us. He may even come to think better of poor 'Edwin's' first attempts to construct the 'identities' he 'recognised'.

<sup>1</sup> Contrast *Personal Idealism*, pp. 95-97.

(5) We come lastly to Prof. Taylor's double criterion of ultimate truth and the 'three' (really *two*) passages in which his empiricist version thereof is enshrined. The first of these Prof. Taylor holds to be irrelevant because "it would be quite possible to maintain that nothing is real but experience, and yet to hold that this conclusion itself must be based on other than empirical grounds, in fact to be at once an experientialist in one's metaphysic and a rationalist in one's logic," and this is 'in fact his position'.

I confess to a gasp. I had not suspected Prof. Taylor of so remarkable an enterprise, especially in a context which seemed to insist only on the priority of immediate psychical experience to thought. And even on reflexion, it strikes one as a singularly infelicitous undertaking. For if the logical grounds of metaphysic are to be rationalistically conceived as "other than empirical," and yet "nothing is real but experience," must not the basis of the system be sought in the unreal? And even if Prof. Taylor does not mean this, but has lapsed into an ambiguous use of the words 'experience' and 'empirical' and regards his *a priori* reasonings as really falling within experience, is he not proposing to make a part of reality the criterion of the whole? And has he not bound himself to provide an *a priori* rational deduction of the possibility of all experience? This is, I believe, what even Hegel is now said to have been unjustly suspected of attempting. Anyhow, whether he makes the attempt or not, his doctrine will exemplify one of the most persistent of the failings of intellectualism, viz. its tendency to exalt the rational at the expense of every other aspect of reality.

The 'second' passage Prof. Taylor admits looks like empiricism; but he 'had always vaguely supposed himself to have got it from Aristotle,' and I have 'concealed the all-important point that the trial referred to was purely logical and *a priori*'. But as before in the case of the postulates, I was concerned with the principle and not with the limitation Prof. Taylor arbitrarily imposed on its use. Once it is admitted as a principle that a claim to truth may be tested by trying how it works when applied, why should its applications be restricted *a priori*? Besides to my thinking the distinction between '*a priori*' and '*a posteriori*' is only relative and therefore not here relevant.

As for the third passage Prof. Taylor's defence seems to come to a replica of what he said *sub* (4). For the reasons already stated, it still seems to me to tell distinctly on the empiricist side.

Considering Prof. Taylor's explanations as a whole therefore I must repeat that though they are beautifully explicit and psychologically quite satisfactory, they are not logically adequate. In other words Prof. Taylor must be acquitted of any intention to be pragmatic, and I must apologise for suspecting him of departing so far from the path of orthodoxy: but I may still hold that he has said things of which the meaning and implications are inconsistent with his absolutism, and we now have it on his own

authority that some of these utterances really were derived from sources alien to it and more akin to my own views. Perhaps we may agree to call these dicta *pseudo-pragmatic* and expect to find them extensively modified in the next edition of Prof. Taylor's book.

## II.

The earlier part of Prof. Taylor's article challenges me to give a pragmatic explanation of some choice specimens of 'useless' knowledge, and urges some objections which I shall have great pleasure in meeting. But before taking up these matters, I must correct some misapprehensions of Prof. Taylor's concerning points of secondary importance.

First as to his inaccuracies in quotation. I only referred to them in passing (N.S., 55, p. 353), and they are worth a mention only because he had thought fit to censure Prof. James for citing the *McGill University Magazine* as the *McGill Quarterly*.<sup>1</sup> One of these moreover has become so habitual with our critics that I do not wonder that Prof. Taylor has difficulty in discerning its existence. He glibly criticises on page 60 "the doctrine that 'the true is the useful,'" as if that were identical with the assertion that 'the true is useful' and I had not found it necessary to draw out the formal implications of this latter in *Humanism*, page 38. Not only that, but a little lower down Prof. Taylor indulges in the very 'simple conversion of an A proposition' which I had deprecated in advance, when he infers that "all useful things are true things". As I had also pointed out, such conversion would have involved us in a denial of useful fictions.<sup>2</sup>

The other looked more invidious. I had said<sup>3</sup> that the disguise of Mephistopheles as a mediæval devil had apparently deceived "all the other characters in *Faust*, except the Lord," and all Goethe's readers except myself. Prof. Taylor thereupon remarked that I shared, by my own confession, "with the Supreme Being the unique distinction of being the sole person in the universe to have fathomed the inner meaning of Goethe's *Faust*". That is he attributed to me a claim to share with the Deity what I had really professed to share with Goethe. The difference and the inaccuracy are, I should think, fairly obvious. For '*Der Herr*' in Goethe's *Faust* is the Deity as little as the Absolute in Prof. Taylor's *Elements of Metaphysics* is the ultimate explanation of the universe. However Prof. Taylor wholly disarms any resentment I might have felt by now explaining that he was making a joke! But that I of all men should thereupon be charged with curtailing any philosopher's liberty to make jokes! I hope on the contrary that Prof. Taylor will make more 'jokes' and better ones. Still it is worth remembering that even in jesting it is better to make the cap fit.

Secondly I must disabuse Prof. Taylor of a notion that a merely

<sup>1</sup> *Phil. Rev.*, xiv., 265.

<sup>2</sup> *Humanism*, p. 37.

<sup>3</sup> *Ibid.*, p. 168.

autobiographical remark of mine about my feelings towards Prof. James's critics had any reference to himself. The time referred to was considerably anterior to the date of any of Prof. Taylor's publications.

It is a mistake again to read 'disapproval' into my suggestion that on one occasion Prof. Taylor may have been 'overzealous' in controversy. If I had intended that, I should justly have exposed myself to Prof. Taylor's rebukes. But I can assure him that I have no sort of objection to controversy. Far from it. I like it. And I do hope Prof. Taylor will not stop on my account. Truth moreover has nothing to fear from controversy. It introduces a human element into science, which is always stimulating and often enlightening and efficacious in clearing up confusions and misconceptions. Indeed I feel sure that if, when the new issues were first raised, they had been honestly argued with instead of being met first with attempts to burke them and then deprecated in *quid-me-alta-silentia-cogis-rumpere* tones, we should all understand both them and each other much better, and be on much pleasanter terms to boot.

No; what I was really remarking on was simply the fact that Prof. Taylor had neglected to back up a very sweeping assertion by illustrations. I feared that he had been carried away in the heat of the argument and asserted more than he could substantiate. But now that he has given me three beautiful examples of what he means by assertions which differ as proved truth and demonstrable contradiction while their practical consequences are indistinguishable, I apologise for my suspicion. It will appear later whether by thus repairing his omission Prof. Taylor has also helped his cause.

Lastly Prof. Taylor misses a very simple point when he rebukes me for taking him for an extreme intellectualist. So far from thinking him that, I was disposed to question rather whether both he and his master ought not to be far *more* intellectualistic in order to be safe in their intellectualism.<sup>1</sup> Nay, Prof. Taylor's seemed to me so shaky that I even thought it possible that he might be on the verge of giving it up altogether. The point of my criticism therefore was that the place he gave to emotion, etc., was inconsistent with his intellectualism. And I am astonished that he does not see this to be the plain meaning also of the passage he complains of. It was a comment merely on the (to me) incongruous combination of emotional interests and desires to know with an insistence on a belief in 'pure' thought.

Prof. Taylor's manifest failure to see this difficulty moves me therefore to ask him point blank what he takes 'pure thought' to mean and to be '*pure*' from, if not from emotional and volitional contaminations? Have a 'disinterested' interest and a 'pure' thought dependent on emotion never struck him as paradoxes?

<sup>1</sup> For my view of Mr. Bradley in this respect, cp. N.S., 52, p. 525.



Verbal (?) contradictions of this sort seemed to me to run through all his utterances: on the one hand he was strenuous on behalf of 'pure' thought, on the other he emphasised the importance of the emotions which sustained the intellectual life. This could not, I thought, be pure inadvertence. So I tried to elucidate it on the analogy of Kant's refusal to regard the 'pure respect for the moral law' as psychologically classifiable with the other feelings; but I confess I do not really know what Prof. Taylor can mean.

### III.

We now come to what is theoretically the most important part of Prof. Taylor's paper, and also that most welcome to me as being the very thing I had long asked for, *viz.* his illustrations of absolutely useless knowledge. I must begin by expressing my gratification that I should have persuaded him of what I had to point out in N.S., 54, p. 238, *viz.* that there is a good deal of the truistic about pragmatism. Its fundamental principle is *almost* a truism, because in 99 out of 100 cases of recognised truth the test whereby this is established is pragmatic. But not quite, as Prof. Taylor supposes. For in the 100th case, it turns out that the alleged 'truth' is no truth at all. Now I had rashly supposed that the bitterness of the absolutists' opposition to the new theory was due to their perception of the deadliness of the pragmatic test in the 100th case, and that they denied its applicability to the 99 in order to preclude its application to the 100th. But now Prof. Taylor has made it clear that they have actually never understood its application to the 99! This astonishing fact is revealed by his choice of examples.

It comes out best in his second example, which I will therefore take first. It is just the sort of simple and elementary example one might choose to illustrate the *working* of the pragmatic test of truth! The impossibility of answering truly the question whether the 100th (or 10,000th) decimal in the evaluation of  $\pi$  is or is not a 9, splendidly illustrates how impossible it is to predicate truth in abstraction from actual knowing and actual purpose. For the question cannot be answered until the decimal is calculated. Until then no one knows what it is, or rather will turn out to be. And no one will calculate it, until it serves some purpose to do so, and some one therefore interests himself in the calculation. And so until then the truth remains uncertain: there is no 'true' answer, because there is no actual context in which the question has really been raised. We have merely a number of conflicting possibilities, not even claims to truth, and there is no decision. Yet a decision is possible if an experiment is performed. But this experiment presupposes a desire to know. It will only be made if the point becomes one which it is practically important to decide. Normally no doubt it does not become such, because for the actual purposes of the sciences it makes no difference whether we



suppose the figure to be 9 or something else. *I.e.* the truth to, say, the 99th decimal, is 'true enough' for our purposes, and the 100th is a matter of indifference. But let that indifference cease, and the question become important, and the 'truth' will at once become 'useful'. Prof. Taylor's illustration therefore conclusively proves that in an actual context and as an actual question there is no true answer to be got until the truth has become useful. This point is illustrated also by the context Prof. Taylor has himself suggested. For he has made the question about the 100th decimal important by making the refutation of the whole pragmatist theory of knowledge depend on it. And what nobler use could the 100th decimal have in his eyes? If in consequence of this interest he will set himself to work it out, he will discover this once useless, but now most useful, truth, and—— triumphantly refute his own contention!

I pause before passing to the other illustrations, in order to correct a serious mistake as to the nature of the pragmatic test into which Prof. Taylor has fallen. He repeatedly (pp. 82, 83) assumes that when two practically equivalent assertions are found, I must say that both are 'meaningless'. But this is not at all what I am bound to do.

It was the earliest and simplest formulation of the pragmatic test to declare that when there is no practical difference between two assertions, *they mean the same*. They may both be true, or both be false, but neither of them need be meaningless, and clearly if the one is not, the other cannot be (except of course in so far as it claimed to be an *addition* to the knowledge conveyed by the other, in which case it may be called meaningless *qua* such an addition). *All that is meaningless is the difference between them, and so the question about them.* For this obviously disappears if the alternatives have coincided and the question is reduced to one between two verbally various forms of the same meaning. It is this, the original 'principle of Peirce,' which I have always upheld and which any one familiar with the principle must have seen to be implied in what I said. Prof. Taylor, however, has confused the meaninglessness of the difference between two assertions with the meaninglessness of the assertions themselves. And so it is no wonder he finds the whole pragmatic theory hard to take in. I am a little ashamed to labour so simple a point at such length, but I fear this error may be more widespread than I had suspected.

Before going on I must also come to an understanding with Prof. Taylor as to the meaning of the term 'practice'. It is my duty to warn him that he is not entitled to take for granted my assent to his conception thereof. When Mr. Bradley proposed to define it as the *alteration of existence*, I at once protested<sup>1</sup> and gave some reasons for objecting. Prof. Taylor's present definition,<sup>2</sup> though very similar, is yet less explicit than Mr. Bradley's

<sup>1</sup> N.S., 52, p. 534.

<sup>2</sup> Like that in *Ele. of Met.*, p. 121.

on a vital point. Does "the origination by individuals of changes in the temporal order of events" include alterations in their own thoughts and those of others? If it does, 'practice' will spread over the whole of Prof. Taylor's 'theoretic' field: if it does not, all human agency will be excluded from 'practice'.<sup>1</sup> In either case the definition reduces to absurdity.

I must warn him further that in formulating my theory of knowledge I have always laid the chief emphasis not on its relation to 'practice,' but on its relation to *purpose*. The 'usefulness' of truth is a direct corollary, not from the supremacy of 'practice' over 'theory,' but from the purposiveness of thought. That is why I have repeatedly and unequivocally contended that there is no such thing as 'theory' independent of 'practice,' because ultimately both are relative to purpose.<sup>2</sup> Our critics, on the other hand, while descanting on this antithesis, have been strangely silent about the more fundamental doctrine which transcends it. Prof. Taylor therefore has a great opportunity of showing himself superior to his friends by telling us whether or not he admits the purposiveness of mental life, and if he does, whether or not he thinks that it influences our cognitive activities.<sup>3</sup> And it is the more imperative that intellectualists should speak out on this point, because if it is conceded, the whole of the pragmatic theory of knowledge may be shown to follow inevitably.

It follows from this that, when a truth is said to be useful, it may be so for any purpose, however 'theoretic' it may seem in the first instance, though ultimately, when the systematisation of ends is fully carried through, it must be useful also for the highest end of life, *i.e.* for what I should call 'practice'. Hence a proposition concerning the ideal creations of a science like arithmetic is true when (1) it tends to the development of the science, or (2) of another science, or (3) that science as a whole has useful applications to human life. It is unreasonable to expect every detail to be directly applicable; but when a system of thought loses its application to life it ceases to be a science, and becomes an intellectual game and is useful only as such.<sup>4</sup>

If this be borne in mind it will scarcely be necessary to concern ourselves very elaborately with the technical analysis and justification of what are called 'transfinite numbers'. In spite of its formidable appearance I have been utterly unable to detect any relevance in Prof. Taylor's 'illustration,' and cannot conceive

<sup>1</sup> I may suggest as an alternative that to define the practical as '*whatever tends to the control of events*' will be found fairly adequate to the sense in which the word has been used by us.

<sup>2</sup> N.S., 52, p. 583, and N.S., 55, pp. 361-362, which latter passage Prof. Taylor ignores in spite of the italics and the direct application to himself.

<sup>3</sup> Cp. N.S., 54, p. 237.

<sup>4</sup> I have never denied the existence and academic importance of such intellectual games. Nor does Pragmatism deny their usefulness as such. It is only disposed to question whether (like other games) they have not been a little overdone.

how or of what it is, in his opinion, an illustration. I cannot see, that is, how the 'transfinites' can be used as an illustration of 'useless truth,' for the simple reason that they appear themselves to exemplify the usefulness of number. They are, that is, not numbers at all, properly speaking, but a *use of number*, proceeding from an application of number to space, and the paradoxes they involve would seem to be ultimately reducible to the old difficulty of representing the continuous by the discrete. Since Zeno's days this has been recognised as a thorny problem; but how can it possibly affect the validity of number? I cannot therefore understand how the use of 'transfinites' in numbering space intervals can possibly refute any theory as to the nature of number, and can only infer that Prof. Taylor has either mistaken the nature of the 'transfinites,' or (more probably) that of the issue between us.

If however Prof. Taylor dissents from this conclusion I must beg him to make his point a little more explicit. To make his 'illustration' good, let him show us (1) that the 'empirical' and the 'rationalist' theories of number are the only two conceivable and that one of them is right (for if they are *both* wrong, they will not illustrate his contention); (2) that they are strictly incompatible, and (3) that there is an issue between them to which the 'transfinites' are relevant. He should next show us (4) how he conceives the 'transfinites' to arise, and (5) to bear on either theory, and (6) explain what are the 'marked logical advantages' thereby accruing to one of them. Lastly (7) he should try to show how these 'advantages' constitute one theory of number a 'proved truth' and the other a 'demonstrable contradiction'. As regards this last point his language was indeed far from confident, though it would hardly lead one to infer that many competent mathematicians (very reasonably) consider the 'transfinites' as equally compatible with either theory. As regards the other points he was wholly silent. To have argued them all would no doubt have been a long and arduous task, but an illustration which cannot be rendered intelligible without technicalities which had to be avoided was surely a bad one. And it was at least necessary to show that it was relevant, which, so far, it does not appear to be.

I pass therefore to Prof. Taylor's third illustration, that from metaphysics. This I may claim to have answered by anticipation. If it were true that neither Berkeleian nor any other idealism made any practical difference to the 'every day realism' on which we act, it would add nothing to our knowledge and be held to collapse into a meaningless subtlety, a distinction without a difference. Needless to say, however, this was not Berkeley's opinion: he ascribed to his theory the utmost moral value as disposing of materialism. Nor is it mine; Prof. Taylor can find a discussion of the practical difference a real belief in a real idealism should make in *Humanism*, pages 197-198.

The notion therefore that Berkeleianism makes no practical difference is Prof. Taylor's, and is no doubt what has helped him to the conclusion that Berkeleianism is false and open to a 'formal logical disproof'. That this should be so would of course be unfortunate for all the theories that make use of Berkeley's proof of idealism (including apparently Prof. Taylor's own<sup>1</sup>); but even so the illustration gets into difficulties. For if the Berkeleianism which coincides with 'empirical realism' is a 'demonstrable contradiction,' are we to understand that the latter is a 'proved truth'? If so, what becomes of Prof. Taylor's own idealism? If not, what does it profit his point to find that sundry *errors* have practically indistinguishable consequences? Had he not to show that of two such assertions the one may be proved *true* and the other erroneous?

I must conclude therefore that Prof. Taylor has nowhere made out his allegation that of two propositions which are practically, *i.e.* for every purpose, the same, the one may be a useless truth and the other a harmless falsehood. The challenge therefore to our critics (which concluded my last article in N.S., 58, p. 175) to confute Pragmatism and have done with it, by producing an indisputable case of useless knowledge, still stands. Prof. Taylor's 'illustrations,' so far from meeting it, have only exhibited our woeful failure (up to date) to impress on him a clear apprehension of the pragmatic test of truth. And yet Prof. Taylor had distinguished himself by the extent to which he has written about and studied this very matter! Who after this will dare to affirm that the human mind is unbiased by emotion and offers an unobstructed passage to the entry of pure truth?

Prof. Taylor proceeds further to catechise me as to what 'having consequences' may mean (p. 84), and asks: "do you mean *logical* consequences, assertions which are *implied* by the truth in question and ought to be recognised as following from it, whether they happen to have been actually drawn or not? Or do you mean *actual effects* . . . or both these different things at once?"

I have quoted this passage at length because it beautifully exemplifies the false antithesis to which its false abstractions conduct the logic of intellectualism. 'Logical consequences' cannot be separated from psychological effects in the way supposed; they are always first of all psychological effects, and it is only when they are there that their logical value can be estimated. No truth therefore has logical consequences *in abstracto*: they come into being only when some one has psychologically drawn them. By saying that they follow 'logically' we only affirm our belief that all 'reasonable' human minds would consent to draw them; by saying that they existed 'potentially' before we drew them, we

<sup>1</sup> Cp. *Ele. of Met.*, pp. 64-66, where, in spite of his protestations, Prof. Taylor never logically gets off subjective ground.

only antedate conclusions which seem to us so inevitable that we feel we should have drawn them at any time had we had occasion to do so. For all that, we may often observe that reasonings which possess for one mind the highest degree of logical cogency are voted individual fads by the rest.<sup>1</sup> This plainly shows that the feeling of logical necessity is as psychological as any other.

In short, by calling consequences 'logical,' we do not really mean that they could exist without a psychological context. We mean that they are psychological consequences of a peculiar value which it is important to distinguish. 'Logical' processes are primarily psychological, but selected from among the merely psychological, and honoured with a special mark of distinction. So far therefore from being accidental, the psychological consequences are essential to the constitution of 'truth,' and logical consequences would be no consequences at all unless they 'happened to have been actually drawn'. The science of logic so far from being 'independent of,' *i.e.* unconnected with, psychology, differs from it only in the difference of purpose with which it works over the same material.<sup>2</sup>

Prof. Taylor proceeds to find a difficulty in the obvious fact that 'not only truths but also falsehoods have consequences' which should be easily dispelled by this conception of the logical as a *valuable* sort of psychological product. He complains that I afford no guidance on the "all-important point" of "how the consequences of truths as such differ from those of error as such". And then he proceeds to quote a passage which plainly gives my answer, to the effect that the 'true' is what forwards and the 'false' what thwarts a human purpose (primarily logical). Or in other words 'true' and 'false' are the forms of logical value, positive and negative.<sup>3</sup> The answer to Prof. Taylor's question is simply: 'In value'. I cannot put the matter more clearly or concisely.

Of course, this answer is *general*, as befits a general theory of knowledge. What answers in detail are 'good' and 'true' as responses to what human interest is a question for the special methodology of each science, and also for social conventions. And until an actual case is presented, it is impossible to show how precisely certain truths forward certain interests.<sup>4</sup>

<sup>1</sup>In one of his empirical moods Prof. Taylor has himself made some excellent comments on this fact. See his *Problem of Conduct*, pp. 369-371.

<sup>2</sup>Contrast Prof. Taylor's treatment in *Phil. Rev.*, xiv., 3, in 'purging' logic of psychological accretions' and asserting that "the notion of an individual thinking mind is absolutely irrelevant" to the nature of truth. How all this is compatible with the very "specific emotion" which he finally finds to be essential to the existence of logical assertion (pp. 287-288) is of course the puzzle noted above (pp. 383-4).

<sup>3</sup>Cp. *Humanism*, pp. 54-58 and *MIND*, N.S., 58, pp. 160-176.

<sup>4</sup>Prof. Taylor's poser about the doctor who risks his practice by brutal veracity fails from ignoring the divergences (explained in *Humanism*, pp. 58-60) which arise from the fact that an individual's purpose is not always

As for the phrase "*pro tanto* true" which Prof. Taylor suspects of dishonest 'hedging,' it was simply intended to convey a warning that our first predications of 'truth' are rarely our last, as our proximate are rarely our final ends. 'True' like 'good' is predicated at different levels, and as we proceed from the lower to the higher purposes, a valuation made at a lower level is not of necessity sustained. It is this process which gives rise to the methodological principles, which abound in all the sciences, and may be called 'truths' or 'fictions' according to the standpoint from which they are regarded.

This exhausts the points in Prof. Taylor's article which I can think relevant to the issue, though some have had to be treated more briefly than their importance demands. But I hope I may have succeeded in making it clear that if pragmatist epistemology is more revolutionary, it is also more systematic and adequate, than its humble beginnings in Dr. Peirce's magazine article appeared to portend. And it resembles natural products, and differs from the artificial 'systems' of individual philosophers, also in this that it possesses the capacity of growth.

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socially valuable nor are his interests always harmonious with those of society. The 'good' and the 'true' ἀπλῶς are not always so τὰν, as Prof. Taylor might have remembered from Aristotle. Usually the social valuations prevail over the individual, and we are conventionally obliged to call 'good' and 'true' what may be 'bad' and 'false' for us. Far more complicated cases, which it is interesting to work out, arise however in connexion with the 'transvaluation' of old values and the establishment of new ones.

## WUNDT AND 'PURE SELF-OBSERVATION'.

WHEN a science is advancing with leaps and bounds, the problem of the methods to be employed in that science cannot be regarded as a burning question ; but when there are many workers, as in the psychological field, and when the advance of psychology appears still to be a matter of individual opinion, the question of method deserves the gravest and most minute attention. The appearance of the first volume of the translation of Wundt's *Principles of Physiological Psychology* (fifth edition) is, therefore, a fitting occasion for reviewing the problem.

The "subjective" method, Wundt holds, has entirely failed because while "in natural science it is possible, under favourable conditions, to make an accurate observation without recourse to experiment, there is no such possibility in psychology" (p. 4). It is, therefore, not the speculative method, but scientific self-observation—two very different things—which is condemned by Wundt, for, as he says, "accurate observation implies that the object of observation can be held fast by the attention" (p. 5), and that is not possible in self-observation where the contents "are at the opposite pole from permanent objects" (p. 4).

Now it is abstractly possible that Wundt and others have made determined efforts at systematic self-observation and that they have, as a result, come to the conclusion that systematic self-observation is impossible ; but it is also abstractly possible that, since "psychological inquiries have, up to the most recent times, been undertaken solely in the interest of philosophy" (p. 2), only the speculative method has been applied, the method *par excellence* of philosophy and philosophers. Accordingly, it is at least abstractly possible that the introspective method, scientifically directed and applied, may prove a method which is eminently useful in psychology.

With the great German thinker, and with all non-introspectionists, I would, after some years of laborious inquiry, plead somewhat as follows.

In all experiment something must be *observed* if that something is to be known. In all scientific work, *observation* is implied. All observation is subject to mental exhaustion and illusion. In all observation, too, especially if not of the simplest kind, there is involved *memory* with all its drawbacks. Now where we have merely to jot down a single figure, mal-observation and mal-recollection have little scope ; but in ordinary scientific work, even of an



experimental kind, much is left to accurate observation, the object observed is changing, the attention cannot be fixed for long, and the memory is responsible for much. Yet, with trained scientists, mistakes are scarcely taken account of. Suppose, however, that scientists regarded all observation as hopelessly unreliable (which it is if "conscious contents are at the opposite pole from permanent objects"), then all but the single figure experiment which requires no watchful experimenter could be of any value. Hence ordinary scientific observation and experiment would be discountenanced, and, as an indirect result of the absence of practice, the simplest observations and experiments would become unreliable. Furthermore, all inference and verification would be equally ill performed and, therefore, justly held suspect. Of course, the motions of waves in a storm are most difficult to observe accurately, especially from a small boat at the mercy of those waves; but scientific observation is seldom concerned with such problems. If all nature were as unstable as such waves, there would be no more prospect of any physical science, than of an experimental psychology when "conscious contents are at the opposite pole from permanent objects".

To follow a concrete psychological event—as to follow any event—in its entirety is out of the question, nor, fortunately, has scientific observation anything to do with events in their entirety. Assuming, then, that we may ask of psychologists as much, and no more, as of other scientists, we may go on to inquire whether introspection is practicable or whether the mind is a mad ocean and we inside a small boat in the middle of it, as Wundt contends.

Sir Francis Galton asked a number of persons to observe whether in their thinking they employed imagery. Was it, then, impossible to answer his question because of the furious tossing to and fro of microscopically small ideas? No. Some people definitely stated that no images accompanied their thinking; others that shreds of colourless and indistinct images were observable in their thought; and others still that images which successfully mimicked reality were to be noticed while they were thinking. The records of these observations have never been challenged. Hence we may conclude that images other than words may be recollected and that men differ considerably as to the images which they recall. This is no longer a matter of opinion or of hearsay. It is an established fact, a matter of science. Outlines and colours can be recollected, and this can be shown by 'pure self-observation'.

One need not, however, stop at this point. By the same method of often repeated introspection under varying conditions, one may determine how near to exact reproduction of outlines we may arrive. I may recall the face of a friend, study his recalled features minutely, enter into my notebook all I observe, and compare it with the reality and with former entries. Or I may observe a recalled object which has many and various parts and count and measure off everything, and then again compare it with the original.

Furthermore, the conditions for complete reproduction may thus be discovered, be they nearness in time, association, intensity of experience, interest, disposition, or repetition. Indeed, the outlines may be exhaustively studied until our conclusions on the subject exhaust the inquiry, that is, we can learn how outlines are recalled and we can determine the conditions which produce them. We are at last not only able to predict in detail, but to experimentally repeat everything. What is more, the whole matter may be experimentally studied. We observe a selected object more or less frequently under conditions which we more or less vary, and we note the changes in the image. To say that such observation or experiment is impossible—I am referring to visual outlines—is to assert something for which proof should be forthcoming, especially when there are persons who seriously contend for the possibility, as were those who answered Galton's questions. In any case, the present writer is convinced that no external observation is more easy or reliable than internal observation is in this matter. In internal observation I cannot conceive of not being able to recall the many individuals I know and steadily observing their features, which in some cases are traceable in detail and in others are not discernible at all. In certain instances where there is but the merest fugitive shadow noticeable I cannot perhaps tell the story of the particular image; but in many I can account for all that is material. I learn how superficial observation leads to the fixing of few features; how observation which is only directed to immediate satisfaction has little value for the memory; how through superficial recall of an image or attending to it partially or furtively, it is degraded; I notice how recency and familiarity almost repeat the original experience to a confusing degree; and how time, unchecked by repetition, leads to the gradual disintegration of the image.

Or examine the matter from the experimental point of view. Suppose it is a question of verifying Galton's theory that a general idea is a composite image, constituted in any particular instance, say, of all the rivers or mountains I have seen. First, I thoroughly test my memory. Then I take lines of different lengths, thicknesses and inclinations, and note whether they fuse into a composite image. Having done with single lines, I may experiment with figures, from simple to complex. Suppose, then, I find not a single fact, out of many thousands systematically collected, which supports the theory, and everything to show that images never overlap, shall I have a doubt in rejecting Galton's composite image theory on the ground that "conscious contents are . . . fleeting occurrences, in continual flux and change, . . . at the opposite pole from permanent objects"? Surely, any ordinary scientific solution in physics, physiology or chemistry is no more satisfactory, simple or exact than the results of the method employed above, or is it a fact that all scientific work outside psychology—say, in physiology—is always mathematically de-

monstrated and never otherwise? Is it not rather that such observation as we have spoken of paves the way for mathematical demonstrations?

We have examined the question of recollected visual outlines. The problem of the remembering of colours is disposed of in the same manner. Manifestly, when I decide the query as to the colour of a book by examining the image of it, and when I recall deliberately innumerable coloured objects which are familiar to me, and classify them as regards colour observed in the image, there can be no justifiable doubt that one person at least, myself, sometimes recalls colours. Not only outlines, then, but objects as coloured may be recollected.

Moreover, the inquiry we made as to visual images, may be extended to images referring to the other senses. In this way we may decide as to recollecting olfactory, tactile, taste, and auditory sensations. We may go farther and study percepts and their composition and origin on the one hand, and, on the other, try to find in the sensations those factors which differentiate the sensations. We may examine thus trains of thought, the nature of the memory, of habit, of the emotions and of the will,—that is, the whole of the mind,—and obtain by this method some point of view from which the total of mental processes seems built up of a few elements.

He who is in a towering rage will find it impossible to examine his rage when it is at its height; and he who is untrained and is not quite clear as to what he wishes to observe or who desires to observe events in their entirety, will despair of his task; but a professional psychologist need neither be considered as an untrained beginner nor need we think that everybody is always in a towering rage or desires to observe events in their concreteness. If as yet the psychologist is no more ambitious than his brother physiologist who troubles himself little about time measurements and about making an exact science of his subject, he will find that, relatively to physiology, for instance, the task of the scientific introspectionist is a light one. "Favourable conditions" for observation are as plentiful in psychology as in most other sciences.

Of course if "conscious contents are at the opposite pole from permanent objects; [if] they are processes, fleeting occurrences, in continual flux and change," all direct self-introspection is ruled out of the question, "and under no circumstances can it lay claim to accuracy". Indeed, all verification of hypotheses and experiments is likewise impossible or unreliable, and "experimental" psychology becomes as futile as "subjective" psychology.

No sane man could accuse Wundt of being ill-informed and no man who is himself impartial would denounce the great German psychologist as being governed by blind prejudice. Either, therefore, our account of the steadiness of mental facts is incorrect, or else no one, of any recognised standing, has attempted to show that "pure self-observation" is possible and practicable. When

Wundt, therefore, says that "the subjective method has no success to boast of," a statement scarcely borne out by facts, he can only refer to the *speculative* method which naturally is as fruitless in psychology as it used to be, in its time, barren in the physical sciences. To justify his condemnation of systematic introspection, Wundt would have to show that the subjective method he speaks of was applied, unsuccessfully, in the sober way of close, careful and repeated examination under a variety of conditions; but this he does not attempt to do, and this he could not do since the believers in the "subjective" method are emphatic in dissociating themselves from systematic introspection and on the same grounds as Wundt.

Still, if it could be demonstrated that the experimental, or rather the psycho-physical method, is successful, it would be of small importance whether we do or do not neglect the method of systematic introspection. Wundt says that "the subjective method has no success to boast of; for there is hardly a single question of fact upon which its representatives do not hold radically divergent opinions" (p. 7). What has been the success, then, of the "experimental" method? "Whether and how far," Wundt replies, "the experimental method is in better case, the reader will be able to decide for himself at the conclusion of this work. He must, however, in all justice remember that the application of experiment to mental problems is still only a few decades old" (p. 7). The statement that the application of experiment to mental problems is still only a few decades old, is very true; but youth alone is no proof of success, though it may contain the promise of it. Plainly, believers in the subjective method, speculative or scientific, may retort in Wundt's own words, that the result of the work of innumerable experimenters in almost innumerable laboratories is that "there is hardly a single question of fact upon which its representatives do not hold radically divergent opinions". Wundt himself only refers to his book, not to commonly accepted facts, and hence it is possible, if not probable, that the "experimental" method may keep us in the wilderness, as the "subjective" method is said to be doing. Who knows where the flaw may be in the psycho-physical method? Perhaps the simple facts experimented upon are not simple at all. Perhaps the facts dealt with *can*, and *must*, be border-facts which tell us nothing of the interior. Perhaps the mathematical method may only be in place at the close of psychological inquiries and not at the beginning. Finally, perhaps the "experimental" method must go hand in hand with that of systematic introspection on a large scale, and is useless if such introspection is not cultivated or is grossly self-deceptive. Who knows? That we are in a dark wood is certain; but that the experimental method will bring us out into the open and into the blessed sunlight, no one can hold except he walk by faith.

Under these circumstances it is legitimate to plead, without in

any way denying the possibilities of the "experimental" method, that there is another as yet untried method, plausible beyond any other, which men might apply, perchance with success, perchance not—the method of self-examination by means of systematic observation and experiment as sketched above. The idea is not new—Beneke lauded it to the skies, and psychologists—however they may protest that "the endeavour to observe oneself must inevitably introduce changes into the course of mental events, changes which could not have occurred without it, and whose usual consequence is that the very process which was to have been observed disappears from consciousness" (p. 5)—have never failed to resort to it occasionally. The plea, therefore, is that a relatively old method which, to the writer's knowledge, has never been applied systematically—and everything depends on the *systematic* application—should at least receive serious consideration, apart from those many speculative objections which evidently beg the very points which are to be demonstrated.

If the question be now raised why internal observation has not been systematically pursued by psychologists as external observation has been systematically employed in the other sciences, we find our answer in Wundt. He lays it down, perhaps more emphatically than is necessary, that "psychological inquiries have, up to the most recent times, been undertaken solely in the interest of philosophy" (p. 2). If this be so, who can be astonished if the speculative method and not the objective scientific method has been applied until recently to the study of mental facts? And, seeing that Wundt himself is a philosopher, does not this account for his opinion that self-inspection is supposed to be "inevitably exposed to the grossest self-deception," and that the "sole resource" of the subjective method "is an inaccurate inner perception"? (p. 7).

Finally, it is true that a distinguished scholar has at the end of a long and brilliant career condemned root-and-branch the introspective method as applied apart from "experiment," and that able thinkers before him—back to Herbert, Kant and Hume—have expressed themselves not less emphatically in the same vein. At the same time, all these men were philosophers practised in the *speculative* method and confessedly strangers to the scientific method of exhaustive and circumspect observation and experiment. Shall we, in a scientific age, echo this universal condemnation without seriously questioning it first? Who knows from what quarter the truth may come? Perhaps from some despised Nazareth.

GUSTAV SPILLER.

## VI.—CRITICAL NOTICES.

*Studies in the Philosophy of Religion.* By GEORGE GALLOWAY, B.D., formerly Examiner in Philosophy in the University of St. Andrews. Edinburgh and London: Blackwood & Sons, 1904. Pp. 328.

THIS work, reviewed thus late solely by the fault of the present writer, undoubtedly forms one of the most substantial and rewarding contributions to Religious Philosophy which this country has produced in recent years. It does not pretend to cover the whole field, and the author cautions us against supposing that it was his purpose, *more Germanico*, to deal with the subject systematically. Yet we know that essays have stimulating qualities of their own; and while the six essays comprised in the present volume do not amount to a system of *Religionsphilosophie*, they are consistent with one another, and would find their place in a system. The book is uniformly characterised by lucid, massive, competent thinking, and it is unusually well-informed. Mr. Galloway's mind is of the synoptic order, and the broad and exact learning he commands has enabled him to impart to his ultimate conclusions a credibility and impressiveness which do not always belong to the general views of the philosopher. The clear, steady movement of ratiocination by which the argument at each stage is unfolded, and the writer's gift of keeping rigorously, though without pedantry, to the matter in hand, make what he has to say instructive in a very high degree. One improvement in form—a very slight one—I venture to suggest, is that each essay should have prefixed to it a brief synopsis of its contents, as is done in the recent collection entitled *Personal Idealism*.

Mr. Galloway is notably strong on the side of psychology and history; but he is also possessed of a gift for metaphysical thinking, and as a philosopher is perhaps best described as belonging to the school of Lotze. Like his master, he is on his guard at every point against one-sided views. He is not a Utilitarian; but he finds that the rigid exclusion of results from the valuation of conduct is not possible. He concedes that judgments of value play an important part in religious cognition; he denies that theology, as a science, can be reared on this basis. He is not a Hegelian, for he holds that Hegel gave no adequate psychological analysis of the religious consciousness; but neither is he a Voluntarist, for he re-

jects "the gospel which some at present preach, that reason is only the slave of feeling or the hired servant of will". There is a word in season both for the orthodox theologian and the devotee of materialistic naturalism. This strain of sober and judicial impartiality runs through the whole; and if to some it appears to lack certain qualities of philosophical sweep and daring, in the minds of many more, I believe, compensations for this absence of intrepidity will appear in its pre-eminent moderation and knowledge. "Some of the best work in the Philosophy of Religion," we read at one point, "has been done by those who have treated the pure and the practical reason, the intellectual and the value-judgment, as complementary and mutually supporting, and so have endeavoured to rise to a view of God which satisfies the whole man" (p. 34). This is the temper in which Mr. Galloway also contemplates the problem. In the account which follows I shall confine myself, in the main, to bringing the author's chief points together, being disqualified as a critic through substantial and admiring agreement with his general argument.

The standpoint, then, from which the subject is here studied is very much that occupied by a writer like Pfleiderer. We can never know God perfectly, yet we have some knowledge of Him which is true so far as it goes. Such knowledge is partly speculative and partly practical. "The whole inner side of the divine life is beyond our grasp. And when we try to express the Idea of a Being who is beyond space and time, our thought must perforce be figurative" (p. 12). In the first essay these principles are employed in a critical examination of the tendencies of Religious Philosophy from Hegel to the present day. Mr. Galloway finds that for the last seventy years the tide of pure speculation has ebbed steadily, the counter-tendency growing all the while to reduce thought to a quite subordinate place, and to view feeling and will as the properly constitutive elements of the religious mind. However, the movement has not been uniform. Thinkers like the Master of Balliol and Prof. Royce have held unwaveringly to the principles of idealism, with "a real faith in the capacity of reason to deal effectively with the highest problems". To these may now be added the extremely suggestive and uncompromising negations of Mr. McTaggart, with their calm and fascinating assumption of metaphysical common-sense. At one or two points in a later essay Mr. Galloway touches upon the lines of reasoning with which Mr. McTaggart has made us familiar, in a way which indicates his fitness to treat of the subject at greater length. The whole paper is a very informing one, and the criticisms of Rauwenhoff, Höfding, and James strike me as specially good.

The second essay, which handles the mutual relations of the Natural Sciences, Ethics and Religion, abounds in valuable matter. The general thesis argued for is that while Ethics and Religion utterly transcend the scope of mechanical categories, an immanent teleology resides in Nature itself which convicts the purely scientific view of inadequacy. The universe can only be interpreted from



the higher levels of teleological thought. This leads up to some fresh and valid writing on the intrinsic character of moral freedom. There is that in moral action, we are told, which differentiates it qualitatively from mechanical process, while at the same time vetoing its interpretation in terms of spiritual determinism. To say that action is necessarily determined by character is to forget that, "in point of fact, man in his temporal history has never unified his character so completely as to exclude the possibility of an alternative in conduct" (p. 69). Otherwise, it is futile to try to make sense of facts like repentance and moral obligation. This is interesting, as suggestive of a growing company of fully-equipped philosophers who refuse any longer to profess satisfaction with the deterministic substitutes for moral interpretation current twenty years ago, and who are supported in their resolve to be heard by the conviction that, whether from the human or the divine point of view, evil is that which "ought not to exist," but which nevertheless does exist, as being created by the volition of finite beings. Mr. Galloway further pleads, and it is one of the most fruitful ideas of this essay, that not only is moral freedom something that grows, but that it can attain perfection only in a perfect environment. Thereafter he passes,—by way of a searching examination of the idea of self-realisation, in which he discusses ably the relation of the ideal self to the actual,—to the conclusion "that a Supreme Ideal must in some way be real, if the ends of conduct are to be co-ordinated, if partial ideals are to be transcended". On the other hand, this appears to lead to an insoluble antinomy between the moral progress of the self in time, and the timeless and perfect Self which we must postulate if there is to be any true standard of value. Nothing, accordingly, can remove this obstacle to thought but to transcend the moral consciousness as such, so finding in Religion the proper goal and the necessary completion of Ethics. These are ideas which, in a somewhat different form, have received prominence in the writings of Mr. Bradley and Mr. Taylor, with their contention that thought, if it is to be consistent, must finally move *jenseits Gut und Böse*; and it may be said here that Mr. Galloway's treatment of the subject, for inner truth and philosophic justice to the interests concerned, need not shrink from comparison with theirs.

Leaving on one side Essay III., on "Religious Development: Its History and Interpretation," as of less significance from the philosophical point of view, though suggestive and closely packed, let us come to Essay V., in which the book's real centre of gravity is placed. Its title is "The Ultimate Basis and Meaning of Religion". Ontological speculations, we are told at the outside, being difficult to verify, all we can ask in the Philosophy of Religion is "that they give a coherent view of the facts in their broad features, and that, to some extent at least, they impart a satisfying meaning to them" (p. 210). Perhaps it is just because it shares this so modest view of the capacity of human intelligence for ultimate speculation, and accepts from metaphysicians like Mr. Galloway a rather dis-



trustful conception of constructive metaphysics, that the religious mind so frequently hesitates to surrender its beliefs at the challenge of the philosopher. I have never read what seemed to me a really satisfying explanation of the validity of inference; yet inference is paradoxical enough, for on the one hand, there must be an identity between ground and consequent, or the conclusion will contain more than the premisses; on the other hand, in the transition from ground to consequent something new must be gained, or proof there is none. Here is an antinomy, in all conscience, right at the heart of logical thinking; yet very few philosophers have been deterred by it from carrying on protracted and confident argumentation. Similarly, the religious mind is apt to argue, a few antinomies cannot be fatal to it either; they cannot nullify its efforts to reach and hold truth. Again, if it be true, as we read (page 214), that for the philosopher the Supreme Reality is to be found within the world-process rather than without it, while religion is bent rather on personal fellowship with God, as One who has reality over and beyond the experiential process in which He is manifest; then we may not be face to face with an ultimate dualism of mental attitude, but at all events it is natural that the devout mind should occasionally question whether a certain type of metaphysician, usually designated pantheist, always discerns, not to say conserves, the religious interests of life. This quite apart from the fact that no unanimity obtains on the philosophic side as to the speculative truths which ought to be put in place of the rejected conceptions of piety. In passing, I may remark that I find it difficult to decide what for Mr. Galloway is the supreme court of appeal. He tends at one or two points to half-apologise to philosophy for the existence of the theologian; as though theology were a discipline, which, from the intellectually unfortunate circumstances of the case, could hardly expect to attain any high standard of accuracy and rigour in thinking. I cannot see that it is any weakness in theology that it should select its data from history (the Ritschlians, by the way, would not consent to say that their theology was *purely* historical): nor is it, for that matter, correct to distinguish by saying (p. 321) that theology sets out from particular, philosophy from universal, experience. At least the expression is highly ambiguous, for obviously philosophy exercises a selection upon its data no less than the other.

Pursuing, then, the line of inference back from experience to its permanent ground, Mr. Galloway seeks in this admirable essay to formulate a common ground of inner and outer experience. This distinction between "inner" and "outer" has been justified in the preceding paper, which is reprinted from *MIND*. As to the argument there, suffice it to say that the writer comes to the conclusion that outer experience is the interpretation by self-conscious subjects of the action of reals which thought itself does not create. These trans-subjective reals, again, we ought to conceive after the analogy of the self, their qualities being representations in consciousness of the interaction of spiritual substances. Or as it is

put on page 191: "The real on which the ideational activity of the subject works in constructing the phenomenal world is, on this view, manifold spiritual substances or causalities; and the diverse qualities of the world, as given in experience, would be grounded in the various activities of these substances. The basis of the phenomenon termed matter is, on this theory, an inner life which is allied to our own consciousness."

This is a favourite mode of metaphysical idealism at the present hour, and it cannot be reasonably doubted that its claim to overcome a greater number of difficulties than any other theory is very strong. But, besides the obscure problem of the relation of these causal centres, these clots of reality, to the ultimate system or the Absolute, I cannot see as yet that this view is successful in explaining the *appearance* of matter. How, if all reality is at bottom spiritual, should we have even the illusion of that which is non-spiritual? At all events, if it is valid to argue (p. 65) that you cannot explain the illusion of activity and spontaneity without implicitly conceding that such activity and spontaneity in the Self are real, is it quite incompetent to turn the same argument in another direction? Again, the very language in which we are compelled to state the theory seems to create difficulties for it. Grant that the *inner* nature of things is spiritual; is it then involved that they have an *outer* nature which is not? Just as Mr. Bradlaugh could always vote once oftener in the House of Commons than his vote could be disallowed, because he could vote on the motion to disallow his vote; so, protest as often as we may that the *basis* of the phenomenon called matter is an analogue of our own consciousness, it still appears to be implied that this analogue is somehow clothed upon with a non-spiritual vesture or external manifestation, the illusion of matter being thus produced. How do spiritual substances come to cast this "material" shadow? Does not an impenetrable surd remain to the end? Not so much for pure idealism, perhaps; but surely for a thinker who holds, as Mr. Galloway does, that reals exist and are active trans-subjectively. These objections are not sufficient to deter us from acceptance of a theory of this Lotzian type, but they are points on which it needs to come to terms somehow with its critics.

The distinction between inner and outer experience being thus vindicated, the writer proceeds with his argument for a World-ground which not only forms the principle of existence and unity for the spiritual substances aforesaid, but is in harmony "with the implications of inner experience, with the realm of self-consciousness and those personal aspirations and ethical values which form an essential aspect of the self-conscious life". The thought moves steadily past Leibnitzian and Lotzian positions, rejecting them successively, as partially true, but ultimately unsatisfying, conclusions. Prof. Royce's impeachment of realism, as committed to the assertion of individual reals, which are *per se* eternally complete and self-sufficing, is vigorously repudiated; for no principle of being

can be accepted which does not both connect the various individual centres of experience and also allow for their genuine individuality. The type of unity sought for is finally discovered in the idea of soul. In its simplest forms life involves a central activity, and this force which unites and dominates all the vital elements we may name, provisionally, Will. Analogically the question may then be put: "Is it possible that the principle which obtains in the microcosm has its counterpart in the macrocosm? May not a supreme Will be the ground of all interactions between spiritual substances?" Mr. Galloway answers the question in the affirmative, so reaching the primary and formal determination of the principle he seeks. Thereafter it is further qualified as Self-conscious Will and the Will of a complete or perfect Personality. I should be inclined to characterise the pages in which this is done as the most powerful in the book. Important steps in the progress of the argument are the proof that Will *per se* cannot evolve self-consciousness (this against Hartmann), and that a self-conscious World-ground cannot be the purely immanent unity of all individual selves (in opposition to Mr. McTaggart). And perhaps the most significant words in the volume are those to be found on page 255: "It will be a gain if recent discussions have made it clear that the philosophic Absolute and the religious idea of God cannot, as they stand, be made to coincide. If the notion of the Absolute is right, our view of religion cannot hold good; if the claim of religion is valid, the idea of the Absolute must be revised." I should surmise that in his reasoning for a Supreme Self who is the ground of all that is, yet is not the whole of experience, Mr. Galloway would find himself in close, though independent, sympathy with the positions of Dr. Rashdall. A philosophically-minded theologian, however, might say that the proper corollary of his statement that there must be an element of difference in God, a not-self or other which in no way impedes the activity of the self, is some form of the doctrine of the Trinity; at all events if we are not to descend to the level of sub-personal categories in construing the Divine Nature.

I need not follow this excellent chapter in detail, but two points may be noted: first, the assertion that if we are to predicate ethical qualities of the Deity it cannot be on grounds of an intellectual kind, and must be in virtue of a supreme judgment of worth; secondly, the importance attached to the sense of dependence, of incompleteness and need, in the evolution of religion. Discussion may doubtless be also excited in certain quarters by his statement (p. 282) that "in the higher development of religion the transcendent aspect comes to clear consciousness". But there is a whole-some absence of modernity in Mr. Galloway's refusal thus to make religion (or philosophy, for that matter) geo-centric, or to negate and reverse, in the speculative sphere, the Copernican expansion of the world of science. I take leave of this work, the value of which is quite out of proportion to its comparative brevity, with

deep respect and gratitude. I do so, however, with a lingering doubt as to the precise philosophical principles upon which the writer bases his Theism. He speaks many weighty words on behalf of the claim of Reason to say the last word, and appears at times to regard himself as a loyal intellectualist. But many will charge him with separating an autonomous Faith from Reason, and making the gulf between them all but impassable; and for myself, I should say that it is in an ethical teleology, like Kant's, that he finally casts anchor.

H. R. MACKINTOSH.

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*The Origin and Development of the Moral Ideas.* By EDWARD WESTERMARCK, Ph.D. Vol. I. London: Macmillan & Co., 1906. Pp. xxi, 716.

DR. WESTERMARCK'S work fills me with profound admiration as one who has long groped about in the same field of research and almost lost the hope of reducing the facts to order. There is no book in any language that deals concretely with the evolution of morality on so grand a scale or in so authoritative a way. I had therefore far rather spend my time on a digest than on a critical notice; and am fully aware of the futility of offering a criticism made ere the digest—a matter perhaps of months—is complete. As it is, having thus in general terms acknowledged my sense of the immense importance of the treatise as a whole, I shall confine myself to bringing forward a few objections, I hope not captious, to certain aspects of what might be called its philosophic background. Such objections should be raised, if anywhere, in MIND. Even if well grounded, however, they are not serious enough to detract perceptibly from the impressiveness of this rich and crowded canvas. In what follows I shall concern myself solely with the first half of the book, wherein first principles are set forth. The second half, which studies in detail the more important modes of human conduct as far as regards one group thereof (five other groups remaining over to be investigated in a second volume), I may have an opportunity of discussing elsewhere.

Dr. Westermarck at the very outset defines his position as an ethical philosopher. His is an "ethical subjectivism". The objectivity of moral judgments is a chimera. There are no general moral truths. Nothing can be said to be truly right or wrong. In the last resort our moral standard is a personal one. "My moral judgments are my own judgments; they spring from my own moral consciousness; they judge of the conduct of other men not from their point of view, but from mine, not with primary reference to their opinions about right and wrong, but with reference to my own." Why do I pronounce these judgments? Because I am what I am. "Our moral consciousness belongs to our mental constitution, which we cannot change as we please. We approve

and we disapprove because we cannot do otherwise. Can we help feeling pain when the fire burns us? Can we help sympathising with our friends?" Finally, though I cannot help judging in my way, other men cannot help thinking it positively wrong of me not to judge in their way. "Although we hold it to be wrong of a person to act against his conscience, we may at the same time blame him for having such a conscience as he has."

Now with a great deal of this I find myself in sympathy. Nevertheless, I am disposed to criticise (a) the justification or proof Dr. Westermarck offers of his thesis; (b) the conclusion he would draw therefrom as to the function and method of an ethics; (c) its relation to his actual procedure.

(a) Dr. Westermarck entitles his first chapter 'The Emotional Origin of Moral Judgments'. Further, he adduces what are clearly considerations of origin to account for the appearance of objectivity attaching to such judgments. Society is at the back of them; whence the uniformity and, again, the authority they tend to display. On the other hand, we read: "To name an act good or bad ultimately implies that it is apt to give rise to an emotion of approval or disapproval in him who pronounces the judgment". But what is the relation of ultimate implication to origin? At all events they cannot be crudely identified. Nor can I suppose that Dr. Westermarck intends to do this. Whilst some of his arguments refer to history, others appear to rest on analysis. But if one man's analysis of his moral judgments yields him objectivity, and there be no flaw in the actual logic of the analysis, how is Dr. Westermarck, on his own principles, going to upset him simply by analysing his own moral experience and finding there only the echo of the voice of society or what not? I do not see how a subjectivism can profess to reach "ultimate implications" at all. That way lies absolutism. Nor again can it afford to disregard the analysis of personal experience and construct an evolutionary history of man *ab extra*. That way lies a would-be objective naturalism. A subjectivism, it seems to me, must abandon all claim to be dogmatic in matters of general theory, and content itself with setting probability against probability to the end of time.

(b) Moral principles, says Dr. Westermarck, are inaccessible to demonstration because, owing to their very nature, they can never be true. "If the word 'Ethics,' then, is to be used as the name for a science, the object of that science can only be to study the moral consciousness as a fact." Well, all depends on what we mean by "fact". Now it is a fact that at this present moment I am anxious to criticise Dr. Westermarck fairly. But is it the purpose of Ethics merely to register such interesting bits of biography, or at most to generalise therefrom the average moral disposition of the twentieth century reviewer? In this case Ethics would stop short at description. But I suspect Dr. Westermarck of wishing to extend its function to explanation. He would show, if he could,

that I being an average reviewer *must* aim at impartiality. This I take to be the import of the passage above quoted, where he says: "We approve and we disapprove because we cannot do otherwise". Now this is certainly not plain fact as revealed to one and all of us by introspective analysis. Ethics has somehow shaken off its essential subjectivism, or else has gone outside itself for its principle of explanation. The choice lay between an appeal to the experience of the moral subject, and frank recourse to the naturalistic hypothesis. Dr. Westermarck seems to hold to subjectivism just so long as to make nonsense of our ethical experience. Then, in order to make sense of it again, a deterministic naturalism has to be given a more or less free hand.

(c) Such a deterministic tendency manifests itself, to my mind, in the interesting discussion that immediately follows on the nature of the moral emotions. These are held to form a species within a wider class termed the "retributive emotions". Thus moral approval is a form of "retributive kindly emotion," whilst moral disapproval is one kind of resentment. What, then, is resentment or revenge in general? Dr. Steinmetz in his *Entwicklung der Strafe* maintains that revenge, inasmuch as its prime function is to restore one's injured "self-feeling," is originally "undirected" save *per accidens* until experience begets a utilitarianism which perceives in the punishment of the author of the wrong a means of preventing its occurrence. Dr. Westermarck opposes to this doctrine the notion of a revenge that is *per se* "directed," that is, essentially involves an aggressive attitude of mind towards an assumed cause of pain. Now I am here not so much concerned with his conclusion as with his method of establishing it. *More suo* he makes biology his starting-ground, but in a short time has passed over into psychology, as if the change of standpoint involved were next to none. "Resentment, like protective reflex action, out of what it has gradually developed, is a means of protection for the animal. Its intrinsic object is to remove a cause of pain, or, what is the same, a cause of danger. . . . The need for protection thus lies at the foundation of resentment in all its forms." Note here the ambiguity of "object," "cause," and "need". Surely the animal does not say to itself, "This causes my pain; I need protection; with this object, then, I let loose my wrath". It is the biologist who says this for the animal. But the question before us is precisely when, how, and why man, or some ancestor of man, first came to say this to and for himself. Simply to assume, as Dr. Westermarck seems to do, that with the growth of intelligence what was before implicit became explicit is to make intelligence a mere fly on the wheel. Not but that a few examples are offered of revenge on the part of animals where conscious direction is claimed. But will these bear close inspection? I cannot help smiling over Palgrave's camel which "bode its time," and finally "looked deliberately round in every direction to assure itself that no one was within sight" before it brained the

boy. Of the Versailles elephant, we actually read that, "as if it knew that the painter was the cause of this teasing impertinence," it squirted water over his drawing. Clearly the narrator supposes it did not know that the painter has set on his servant to worry it. Be these things as they may, however, at this level of experience our clues are at best slight. On the other hand, when we come to deal with the facts about savages—in whose case we may anthropomorphise with relative assurance—we may certainly expect to be given the explicit logic of this or that act, and not such a logic as, by a metaphor, may be said to be implicit in some biological trend discerned by a speculative bystander behind the act. But when Dr. Westermarck lays it down that human resentment, moral or otherwise, is "determined by the answer given to the question, What is the cause of the pain?" I should say that either he is guilty of this confusion between actual and merely potential, or at all events he does not show by the evidence he cites that the savage always puts such a question to himself, though no doubt he often does. Expanding intelligence, I take it, has by no means followed strictly along the lines to which, according to the naturalistic hypothesis, it is foredoomed by biological necessity, but has a wayward trick of shooting away from the path at any angle and yet somehow working round to a point directly ahead of steady-going 'nature'. To particularise, I venture to suggest (though I have not the space in which to substantiate the assertion) that Dr. Westermarck makes rather too little of what for want of a better word we are wont to term savage "religion"—that mass of tortuous superstitions apparently so completely out of touch with the actualities of life, yet capable in the long run of creating in chief part that mental atmosphere which, for better or worse, we civilised beings still breathe. I find that Dr. Westermarck's savage is rather too much of a utilitarian; whose utilitarianism is, as far as the proofs go, not only conscious or half-conscious, but sometimes altogether non-conscious, that is, for the empirical psychologist, non-existent.

On the whole, however, it must be admitted that Dr. Westermarck's more or less deterministic handling of human conduct appears to yield results approximately correct for a great deal of human history, and more especially for its earlier stages. For example, his brilliant pages on Punishment show force of reasoning to be almost powerless to determine practice as compared with the purblind coercion exercised by that mass of inveterate passions and prejudices, the public conscience. Indeed, even to this hour the law reflects the workings of emotion rather than of thought. We punish the foiled attempt less severely than the accomplished crime, simply because the indignation it normally evokes is less. In vain theory protests that the criminal intention was in both cases the same. The feeling of the multitude, misnamed our "natural sense of justice," carries the day. Dr. Westermarck, however, with his strong grasp on fact, is forward to admit that



"want of due reflexion" is responsible for this barbarous state of things, thus implying that somehow we can transcend the plane of fatal dependence on the feeling given. But how, if not by an intellectual, that is at the same time a moral, effort? And such effort, so far at least as we know or are likely to know, is free rather than caused. The ordinary sociology with its cheap determinism borrowed uncritically from the physical sciences may set forth to explain the higher life purely from without, and our withers are unwrung. But we expect an explicit recognition of freedom as at least one 'moment' in human history from an "ethical subjectivism" worthy of the name.

Finally, I would insist that the determinism I am objecting to is one that displays itself at the scientific level, or, in other words, in the organising and explaining of the actual facts of human history. With such a purely metaphysical determinism as Dr. Westermarck professes in the closing chapter of his first part I hardly feel called upon to quarrel here. I cannot myself reconcile an ethical subjectivism with a metaphysical objectivism, but others apparently are able to do so. Dr. Westermarck argues that it is "absolutely meaningless" to regard our actions and selves as anything but "in every respect a product of causes"—a position he identifies with determinism—but maintains that it is quite another, and a wrong, thing to suppose us to be wholly conditioned from without, and not partly from within as well. This wrong view he terms fatalism. Well, my point is that his handling of the facts tends to be, in his terminology, fatalistic. 'Cause' at the level of a rationalistic metaphysic may mean almost anything—free cause for one thing. But at the level of physical science it means something quite definite, and is not, I think, to be transferred in the same sense to social science without grave danger.

R. R. MARETT.

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*Criminal Responsibility*. By CHARLES MERCIER, M.B., F.R.C.P., F.R.C.S. Clarendon Press, 1905. Pp. 232. Price 7s. 6d.

LIKE previous works by Dr. Mercier this book is notable as a piece of vigorous and independent thinking on a difficult topic, well and clearly expressed. The principal aim of the book is to answer the question, "Whom ought we to punish?" The author therefore sets aside the legal definition of responsibility, substitutes for it the definition, "Rightly liable to punishment," and goes on to inquire into the meaning of 'rightly' and of 'punishment'. He quickly reaches the conclusion that "By *rightly* liable to punishment I mean, then, liable to punishment on grounds that appear fair and just to the ordinary man," and proceeds to inquire "what are in fact the aims intended by punishment, and what they ought to be". He argues that retribution is and always has been the main end of punishment and draws the conclusion that "for the practical



purposes of daily life, we must continue to regard punishment as primarily retributive, secondarily deterrent, and tertiarily, and in much lower degree, reformatory". The author thus turns aside from the inquiry into what ought to be the aim of punishment and is content to conclude that what "is" "must be," on the ground that it is necessary to take human nature as it is and as it is likely to be for the next few generations.

This surely is a very unsatisfactory opening to an inquiry into "Whom ought we to punish?" The doctrine that whatever is right may be defensible, but one hardly expects to find it adopted by the inquirer into what ought to be. To say that human nature does not change rapidly is true but profoundly misleading. Its innate dispositions may change but very slowly, yet the opinion and feeling of the mass of men in regard to any topic may undergo radical changes and improvements in a very brief period, if the changes are urged with sufficient force and skill by those who enjoy prestige. All improvement of public opinion comes from the select few, and it is for writers upon such topics as punishment and criminal responsibility to improve public opinion, and not to accept it as it is. Therefore, even if the author had made good his contention that the main aim of punishment is retribution, he would not be justified in concluding either that it ought to be so or that it must be so. But this contention he has not made good. He supports it in several fallacious deductive arguments by which he seeks to refute Bentham's doctrine that punishment should aim primarily at determent. If determent, he says, is the primary aim, "the severest punishment should be visited upon those crimes which every one is under temptation to commit," but this is not the usual practice, therefore Bentham is wrong. But surely, according to Bentham's view, the punishment assigned to any offence should be severe, not in proportion to the number of people liable to temptation, but in proportion to the intensity of the temptation for those who experience it. Very many men are liable to the temptation to ride in first-class railway carriages with third-class tickets or to ride bicycles on footpaths, but a penalty of very moderate severity suffices to enable most of them to resist these temptations. Why, therefore, on Bentham's principles, make them capital offences? Equally fallacious is the argument from the case of Jack the Ripper and from the secrecy of punishment of certain unnatural offences. Surely these latter cases afford the clearest examples of punishment primarily deterrent. If we include with these the crimes of infanticide and abortion, we have a class of severely punished crimes which, in many cases certainly, inflict no pain on others. How then can this class of crimes be brought into conformity with the author's contention that "a person is held responsible when the enlightened public opinion of his age and country demands that he shall be made to suffer in return for pain that he has inflicted"? On the other hand if retribution, the desire to inflict pain on those who have pained others, is the main

motive of the law, why do we not punish severely the classes of offence which probably cause more acute suffering than any other, namely seduction followed by desertion and those offences which lead to the divorce court? The author would have us accept our instinctive desire to avenge injury as the ultimate court of appeal (p. 17). The proof that an act should be punished is that it "raises in you and me, and Tom, and Dick, and Harry, the desire that Bill should suffer pain". "When I declare that A is responsible for the murder of B . . . I mean . . . that in my own mind there is a feeling of uneasiness which demands relief, and cannot be relieved except by the infliction of pain upon A." How then, when A by accident steps painfully on my toe? Am I right in relieving my uneasiness, in giving vent to my instinctive anger by striking him violently? The truth is, of course, that the task of practical ethics is to refine conduct by the deliberate self-conscious control of such instinctive emotional reactions and desires; and to set them up as the ultimate court of appeal is to reject the results of social evolution and to go back to the level of the brutes. For even in savage communities punishment is commonly based on higher grounds than the merely retributive, and aims largely at determent from socially inexpedient conduct; as when an unmarried girl, becoming pregnant, is punished by being isolated until the child is born. According to the author's doctrine no punishable offender should be an object of pity, for pity and desire for retribution are incompatible states of feeling in regard to any one person. Yet the modern tendency of society is to pity the criminal at the same time that it demands strict punishment. Perhaps the case for retribution breaks down most completely in the case of the punishment of the child by the loving parent whose heart is wrung with pity and sympathetic suffering while he punishes; and curiously enough the author fully admits on a later page (p. 63) the wrongfulness of retributive punishment in this particular case.

In spite of this unsatisfactory opening the rest of the book constitutes an important contribution to the subject, especially to the problem of the responsibility of persons of abnormal or diseased constitution. The second chapter arrives at a satisfactory definition of voluntary action, by way of an acute discussion and emendation of the definition given by Sir James Stephen. It runs, "a voluntary act is movement, or arrest or suppression of movement, of the body, directed to an aim or end, and accompanied or preceded by the will to make that movement, or arrest or suppression of movement". The author might with advantage have gone on to distinguish between the voluntary act so defined and the deed, that change in the external world which is effected by the act. For the two things are by no means identical. Many actions fail to accomplish the deed intended. If I put out my hand to help a friend over a stile and, slipping, bring us both heavily to the ground the act is good because the motive and intention of it were good. But the deed is bad. Or again, a father thrashes his son for

bullying his little brother, in the hope of improving his character. The act is good because the motive is good, but whether or no the deed is good depends on whether it produces the effect desired. If the boy is merely hardened in his vicious tendency the deed was ill-judged and so far bad.

This chapter is marred by the author's rejection of the important distinction between intention and motive, he maintaining that the motive is merely a more remote intention. Though the distinction is commonly not clearly conceived, yet it is valid and important, as in fact the author explicitly admits in a later chapter (p. 139) when he describes actions intended but not motivated. Surely the distinction is that motive refers always to some change to be produced in the mind of self or other, while intention refers only to the physical changes by means of which these changes are to be effected. In the case of the father preparing to punish his child, the intention is to beat him, the motive is to make him repent; or to take the illustration chosen by the author—I prepare to drive through Ealing to Oxford. He says my intention is to drive through Ealing, my motive is to reach Oxford. Surely my intention is to reach Oxford and my motive is the enjoyment of the sights or the society I shall find there. It is not until we recognise clearly both these distinctions, that between act and deed, and that between intention and motive, that moral judgments can be satisfactorily passed. We have to pass judgment not merely on motive, on intention, on will, but upon the accomplished deed. The motive must be good, the deed intended must be well calculated to satisfy the motive, the action must be efficiently directed to the accomplishment of the intended deed, and the will must be strong enough to carry through the action, or, in short, in distributing praise or blame we ought to, as in practice we usually do, take into consideration efficiency in realising ends as well as the quality of the ends themselves. In chapter iii. wrong-doing is defined as the doing harm to another intentionally. And then the author finds himself compelled to recognise the importance of the distinction between motive and intention which in the previous chapter he has rejected, for he rightly admits that the infliction of harm intentionally from a good motive does not necessarily incur responsibility. The definition must therefore be completed by adding to it the words—from motives which are not good.

In chapter iv. the nature of insanity is sketched in clear and firm outlines. The most important contention is that insanity is never a partial disease, that we must assume that in all cases "the whole man is a changed being," that "his personality is altered". The symptoms are disorders of conduct, of bodily function and of mind. Disorder of each class is present in every case of insanity, but in some cases disorders of one of these classes, in others disorders of another class are the most prominent symptoms. Disorders of conduct are the most important symptoms and "it is the elaborate acts that are affected first and most, that are lost

earliest in the malady and are latest to be recovered," while defect of the higher forms of conduct is often accompanied by excessive activity in the lower forms of conduct. Chapters v. and vi. treat of disorders of mind. Here the most important contention is that delusion is by no means necessarily present in insanity, that it is not the only symptom which should exempt the insane from responsibility, that when it is present it is never an isolated disorder, but is "merely the superficial indication of a deep-seated and widespread disorder," and that, therefore, the practice, long prevalent, of exempting from responsibility for an act only when it can be clearly shown to arise out of a delusion, was based upon a misunderstanding of the nature of insanity. It is then shown that, quite apart from delusion, crimes may be committed through disorders of the will of two main classes; first, obsessions in which cases the patient "desires, with well-nigh irresistible urgency, to do the act, but does not desire, nay recoils with disgust or with horror from the consequences of the act". The act is intended but is wholly without or against motives. Whether the word desire can properly be applied to the description of the state of mind of such patients as they contemplate the act seems open to question. Can a man simultaneously desire and loathe an object? Ought not the term desire to refer only to what the author speaks of as the consequences of the act? Cases of the second class are those in which the normal emotions and desires are exaggerated in intensity so that they escape from a self-control of merely normal strength. These are classed as cases of moral insanity. It is argued that these states also should be held to diminish in some degree the responsibility of the patient. It is, perhaps, to such cases that the author's doctrine of the retributive nature of punishment can be most plausibly applied. In this connexion a nice problem for the moralist and for Dr. Mercier suggests itself. Assuming that, as seems probable, the crimes for which negroes in the United States of America are commonly lynched arise from an excessive violence of the instinctive desire in the black race, should the criminal be less or more severely punished than the white man who commits a similar crime?

Chapter viii. sums up on the question of responsibility. To incur responsibility by a harmful act, the actor must *will* the act, intend the harm, and desire primarily his own gratification; the act must be unprovoked, and the actor must know and appreciate the circumstances in which the act is done. If we accept the author's retributive doctrine of punishment we must also accept this definition of the conditions of responsibility. But the acceptance of the third provision would involve the exemption from punishment of all political crimes committed with the desire to improve the lot of a people at the risk of the actor's life or liberty. If the provision is to be interpreted, as it seems to be by the author, to mean merely that absence of motive implies insanity, it is of course perfectly sound.

In chapter viii. the famous answers of the judges returned by them to the House of Lords in 1843 are submitted to a searching criticism in the light of the foregoing discussions. The author concludes that in spite of the ambiguity of these answers, the administration of the law is satisfactory. As regards the perennial dispute between the lawyers and the physicians, the author takes up a sound midway position and does not, like so many physicians, hold it to be the sole duty of the medical witness to prove insanity and to secure to the offender immunity from punishment.

W. McDougall.

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*Ueber die Erfahrungsgrundlagen unseres Wissens.* By Dr. A. MEINONG, o. ö. Professor an der Universität Graz. Abhandlungen zur Didaktik und Philosophie der Naturwissenschaft. Band i., Heft 6. Berlin, 1906. Pp. 113.

THIS book, though stated in the preface to be addressed rather to men of science than to philosophers, is full of discussions by which philosophical readers are likely to profit, and is by no means free from philosophical difficulties. Its object is to consider when and how far we can rely upon what appear to be perceptions, whether of physical or of psychical existents. The author keeps as near to a common-sense view of the world as he can, departing from it only when he is compelled by some quite irrefutable argument. On the whole, reality is to be congratulated on passing its examination so creditably; for the net result is that, though things are usually a little different from what they seem to be, they are seldom very different. In this conclusion common sense will readily acquiesce, though many subtleties are traversed in reaching it.

The introduction explains the difference between the *à priori* and the empirical (as here used) to be that the former does not assert existence, and is necessary. Both are to apply only to judgments, not to presentations; thus "red differs from green" is *à priori*, although the presentations of red and green are derived through the senses. Only what is not *à priori* is based on experience.

The first section is devoted to defining *perception*, on which all derivative empirical knowledge depends. A perception is always a *judgment*, not a presentation, for in perceiving we are convinced that the object perceived *exists*. Moreover, if perception were not a judgment, it could not be a means of obtaining knowledge, which it is universally admitted to be. A judgment such as "the tree is green" is not a perception, but a result of analysing a perception: every perception is an existential judgment, not one attributing a quality to a thing. The objects of perception are primarily things, not qualities, and things are not mere complexes of qualities. (The notion of *thing*, which becomes very prominent

in section iv., seems to me insufficiently explained; at any rate I have failed to grasp what is meant by it.) A judgment of the sort considered is not to be called a perception unless it is true, *i.e.*, unless the object exists. Now, if we are to have any reason for believing in our judgments rather than disbelieving, two things are necessary: (1) that there should be a kind of judgments in whose nature it lies to be true; (2) that by means of judgments of this kind we should be able to recognise when judgments are of this kind. These two conditions are more or less fulfilled by *self-evident* judgments. It is self-evident that a self-evident judgment cannot be false, which is the first requirement; but it is not always self-evident whether a judgment is self-evident or not, so that the second requirement is only partially fulfilled. (May it not be doubted whether the first is fulfilled, if *self-evident* is taken in a purely psychological sense? And if it is not, there is danger of tautology.) If perception is to be knowledge, it must be self-evident knowledge. Hence we reach the conclusion (pp. 35-36): A perception is "an immediately evident affirmative judgment of existence concerning a present thing, based on a perceptive presentation (*Wahrnehmungsvorstellung*) (or a suitable substitute for one)". Here a "perceptive presentation" is a presentation whose object is judged to exist in a perception, or in any judgment which is psychologically like a perception, *i.e.*, like, except at most as regards its truth or its self-evidence.

The second section introduces the word *aspection* (*Aspekt*) for what is just like a perception except as regards truth and self-evidence. Thus the question of the "trustworthiness of perception" becomes the question as to when and how far aspections are perceptions, since perceptions have been defined as true. The answer to this generally depends upon whether the object exists. Thus relations cannot be perceived, because they cannot exist; colours might exist, but there are reasons for doubting whether they do exist, and therefore whether aspections having colours as objects are perceptions. The usual reasons for doubting the existence of both primary and secondary qualities are reviewed, and the provisional conclusion is reached that it is doubtful whether there is such a thing as external perception.

The third section, on internal perception, decides that in this case there can be no doubt that some aspections are perceptions, though here also observation is not infallible. When we hear sounds or see sights we can be quite certain that we are hearing or seeing them. A man who has a toothache is quite sure that he has it. (Prof. Meinong denies self-evidence to hallucinations, and would, I suppose, exclude hysterical pains on this ground. But if self-evidence is defined without explicitly including truth, it is hard to see any psychological justification for denying it in these cases.) An element of uncertainty is introduced, even with internal aspections, by the fact that they are never quite simultaneous with their objects. That they are not *always* simultaneous

appears from the apprehension of processes. When a melody is apprehended, for example, we must be hearing all the notes which compose it, yet some at least of them are already past. In fact, simultaneity is merely a limit, which may be realised when the aspection begins; but every aspection lasts for more than an instant, and therefore must be subsequent to its object except, at best, at the instant when it begins. An aspection is not to be called a perception unless there is such an instant of simultaneity<sup>1</sup> (p. 68); and as the interval of time increases, an aspection becomes less trustworthy. It is distinguished from memory by the fact that in memory the object is judged to be past, while in an aspection it is throughout judged to be present. (It is difficult to reconcile this with the instance of the melody, where the earlier notes must be judged as past if the melody is to be apprehended.) Judgments of memory are evident, but not evidently certain: they are *evident presumptions* (*Vermuthungen*)—a rather difficult notion, which ought to be justified at greater length.

The third section contains a very intricate and difficult theory as to internal perceptions, of which the following is an outline: A presentation of red requires a certain content, but the occurrence of this content is not yet the apprehension of the object, which requires an *act*, over and above the passive presentation. If now internal perception possesses itself of the content, it does not do so by a new content: the mere experiencing of the content suffices, together with an act which is different from that by which the red was apprehended. These two acts are called respectively *Auswärtswendung* and *Einwärtswendung* (p. 58). This theory is regarded by Prof. Meinong as an essential part of his argument. It is forced on him by the difficulty of apprehending contents as opposed to their objects.

The fourth section returns to external perception, and endeavours to rehabilitate it as far as possible. It is first pointed out that, if external perception is wholly rejected, all knowledge of the external world becomes impossible. There is a summary criticism of various forms of idealism—too summary, except for those who already accept Prof. Meinong's conclusions. There is also a good criticism of the view that external objects are inferred as the causes of sensations. It is pointed out that, even if the objects whose existence is to be thus inferred are to be found in the chain of causes, there are other nearer causes, as well as more remote ones, and no reason can be given for stopping at one particular point. Thus the external world is only knowable if the senses are more or less trustworthy.

Although the plain man can be induced to admit that the sensible qualities of things are subjective, he can hardly be got to admit that the things do not exist at all. In this Prof. Meinong

<sup>1</sup> Yet, in section iv., Prof. Meinong admits external perception, which, if physical science is to be trusted, can never be quite simultaneous with its object.



supports him: he holds that things, as opposed to their qualities, are really perceived. But even the qualities cannot be wholly subjective, or how should we distinguish a piece of chalk from an inkpot? Here, in addition to "evident presumptions," a notion of inexactitude is called in aid (p. 96): it is contended that one content may apprehend several different objects, though inexactly. Thus it becomes possible that the object of an aspection of colour (say) really is a quality of the thing, but that the same content might have as object a different quality of a thing. Thus not only things, but qualities, will be more or less perceived: in such cases of inexactitude, we may speak of *half-perceptions*. There are then two objects, one phenomenal and one noumenal; "naïve realism" takes the former for the latter (p. 98). It seems to be held—though this is not clearly said—that by means of this notion of inexactitude we can maintain, *e.g.*, that things do really have colours, but not exactly the colours they seem to have. It is argued that half-perceptions in general give sufficient data for judgments of diversity or number; and on this basis we can account for the supposed greater objectivity of the primary qualities. Some phenomena are better evidence than others as to the absolute qualities of things: science is not concerned only with phenomena, and can hope to approximate to noumena by diminishing the inexactitude of external aspections.

It is a pity that the last section is not more explicit, and does not meet in detail the usual arguments, more or less sanctioned in section ii., against external perception. Moreover, the notion of inexactitude put forward is difficult to accept. It would seem as though content and object were connected by a necessary relation of a kind which excludes the possibility of different objects for one content. The natural view of inexactitude is, surely, that the object differs more or less from the object which really exists, not that the content is equally appropriate to several objects. Apart from this rather difficult point, the book as a whole is a valuable contribution to a difficult subject, although it is, perhaps, a trifle too optimistic in its conclusions.

B. RUSSELL.

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*Platons Philosophische Entwicklung*. Von HANS RAEDER.  
Leipzig: Teubner, 1905. Pp. 435. M. 8.

IN 1902 the Royal Danish Society of Sciences proposed as the subject for a philosophical prize essay "an investigation of the position which the most important dialogues occupy, both philosophically and chronologically, among Plato's writings". The results hitherto obtained were to be collected and arranged, and, if possible, fresh results were to be reached on this basis. The present volume is the result, and has been duly 'crowned'. The

author tells us that he did not aim in the first place at new and independent results, but rather at bringing out what seemed to be of lasting value in the mass of existing Platonic literature, and he has performed this part of his task admirably. I know of no other book from which the student can get so clear and accurate an idea of the history and present state of the "Platonic question," and it would be well if we could be sure that every one who ventures to write about Plato, or Greek philosophy generally, knew first at least what is contained in this volume. Not that Raeder has solved the Platonic question or anything like it. He has simply taken stock of all that has been done (and undone) for its solution from Schleiermacher to the present day,<sup>1</sup> and made a few suggestions of his own. That, however, is a very useful piece of work.

In the account which is given of the Platonic question nothing comes out in a more striking way than the fundamental importance of Campbell's edition of the *Sophist* and *Politicus* (1867). Though neglected for almost a quarter of a century after its publication, it is now seen to be the true starting-point of all fruitful Platonic study. It is so with regard to the question of authenticity. The higher criticism of Plato has had an instructive history, which may be commended to theologians as a salutary warning. Raeder shows us how, starting from some more or less arbitrary conception of what was or was not Platonic, critics were led to reject dialogue after dialogue, till in 1866 Schaarschmidt left only nine, and those nine included the *Laws*, which Ast, and at one time Zeller, condemned as spurious. It was Campbell who made an end of all this by his treatment of the *Sophist*. It was seen that the higher criticism was worthless without the lower, and that it must be based on a sound exegesis. The authenticity of one dialogue after another was triumphantly vindicated, and now no one doubts the genuineness of any really important work.<sup>2</sup> It was also Campbell who first made possible a real "genetic" treatment of Plato's philosophy by proving, what all subsequent investigations have only confirmed, that the "dialectical dialogues" were later than the *Republic*, and closely related to the *Timæus*, *Critias* and *Laws*. The best chapters in Raeder's book are certainly those in which he discusses the linguistic and stylistic evidence for the date of the dialogues and the variations in the form of the dialogue itself. What he has to say about the evidence of historical and other allusions is marked by sound

<sup>1</sup> It must, however, be observed that, though the work only appears now in a German dress, the Danish original dates from October, 1903, and there is therefore no reference to any later literature. In particular, Natorp's *Ideentheorie* (1903) is not dealt with.

<sup>2</sup> Raeder rejects only the *Hipparchus*, *Minos*, *Alcibiades II.*, *Theages* and, more doubtfully, the *Clitopho* and *Alcibiades I.* He defends even the *Epinomis*, and I am pleased to see that he accepts the *Epistles*. Paul Wendland has, however, promised to prove these spurious in the course of the year, so it will be well to wait for what he has to say.

judgment, and he shows how neglect of the dramatic form has led to many absurd mistakes.<sup>1</sup>

As indicated by the title, Raeder's treatment of the subject is "genetic," and that is quite as it should be. At the same time it must be said that this method has been much overdone of late, and has led to extreme views which are every bit as unacceptable as those of Schleiermacher and Grote. According to the former, Plato's system was already formed before the dialogues were written, and the appearance of development is due solely to pedagogic considerations. Plato wished to lead his readers gradually on from the mythical to the scientific form of his teaching, and the dialogues, read in a certain order, form a progressive course in which the doctrine, clearly present to Plato's mind from the first, is revealed to us step by step. According to Grote, there is no such thing as a Platonic system at all. Each dialogue is an exercise in method which must be taken by itself, and we cannot say that any one of them shows a more or less developed philosophy than any other. The "genetic" method easily runs into similar extremes, and Plato is sometimes represented as throwing off a number of successive systems in the manner of Schelling.<sup>2</sup> It is supposed that he has left us in his dialogues a complete record of his successive failures and changes of standpoint, and the result comes dangerously close to the view of Grote. Raeder does not go so far, and, in particular, he is quite clear that Plato never faltered in his adhesion to what is called the "doctrine of Ideas," which indeed is nowhere stated more emphatically than in the *Timæus*. He does, however, in my opinion, go too far in allowing a fundamental change in that doctrine—a point which depends very much on our interpretation of the *Parmenides*—though he has himself laid down a principle, which I do not remember to have seen stated so clearly before, and which contains in germ the solution of many puzzles. It is this. We all know that we must carefully distinguish between the historical and the Platonic Socrates, but that is insufficient. We must also distinguish between the Platonic Socrates and Plato himself. Most of the dialogues are Σωκρατικοὶ λόγοι and essentially dramatic; and while

<sup>1</sup> How easy it is to make such mistakes, is shown by the fact that Raeder, who is quite clear about the general principle, makes a particularly bad one himself. He says (p. 123) that the *Phædo* is proved to be unhistorical by the circumstance that in the *Apology* Plato is said to have been present at the trial, while in the *Phædo* he is said to have been absent. To begin with, this is wrong; for Socrates was put to death a month after the trial, and there is therefore no contradiction at all. When, however, Raeder goes on to say that the word οἶμαι in Πλάτων δέ, οἶμαι, ἡσθίνει (*Phd.* 59 B) shows the whole thing to be a fiction, since, if Plato had really been ill, he would have had no need to make such a reservation, he forgets that it is Phædo of Elis who says this to Echekrates of Phleious, not Plato who says it to us. This is as bad as anything in Ast.

<sup>2</sup> Cf. Shorey, *The Unity of Plato's Thought*.

it is certain that Plato over and over again ascribes his own views to his master, we have no right whatever to assume that he is responsible for everything which he makes Socrates say.<sup>1</sup> If only Raeder had followed out this principle more thoroughly, he would have seen that there is an element of truth even in the views of Schleiermacher and Grote, and that this must be taken into account. It is surely the most likely view, now that we know the comparatively late date of the dialectical dialogues, that Plato did not formulate a distinctive system of his own till he was well advanced in life, and that, when once he had reached it, he did not afterwards modify it in essentials. What that system was, we must discover from the later dialogues with the help of the not very luminous or sympathetic statements of Aristotle. So far we must clearly go with Dr. Jackson, whether we accept his results in detail or not. But from this point of view, we may very well regard the intention of these later dialogues as mainly pedagogic, and we need not suppose that Plato has revealed in them his own struggles with fresh difficulties. In fact it is hardly credible that he should have published any of them until he saw his way pretty clearly to the solution of the problems they raise. It must never be forgotten that we do not possess Plato's actual lectures in the Academy, but only such parts of his teaching as he thought fit to make known to a wider public. So far, then, we may agree with Schleiermacher, but Grote's view, which is apparently the very opposite, can be partly justified too. It is quite intelligible that, in such publications, the question of method should take a prominent place, and we may even find it natural that some of Plato's dialogues, especially in the earlier period of his life, should stand in no definite relation to his own philosophical system at all.

These remarks are only meant to show that the "Platonic question" has by no means been solved yet. It seems, however, as if Plato was at last beginning to be studied with the same sort of care that has long been bestowed upon Aristotle. If so, Raeder's book will be an excellent *ἀφορμή*. We cannot go further without a clear knowledge of what has been done, and that we can gain most easily from the volume before us.

JOHN BURNET.

<sup>1</sup> Cf. Ep. II., 314 C, διὰ ταῦτα οὐδὲν πάποτε' ἐγὼ περὶ τούτων γέγραφα, οὐδ' ἔστι σύγγραμμα Πλάτωνος οὐδὲν οὐδ' ἔσται, τὰ δὲ νῦν λεγόμενα Σωκράτους ἔστι καλοῦ καὶ νέου γεγονότος. The last words are wrongly translated by Grote; they mean "smartened up".

## VII.—NEW BOOKS.

*Studies in General Physiology.* By JACQUES LOEB. 2 vols. Pp. 782.  
The Decennial Publications of the University of Chicago, sec. series,  
vol. xv. 1905.

IN these two volumes Prof. Loeb has brought together thirty-eight selected papers previously published in various periodicals, mostly German. The volumes thus contain the most important contributions to general physiology of this very original worker. "A single leading idea permeates all the papers of this collection, namely, that it is possible to get the life-phenomena under our control, and that such a control and nothing else is the aim of biology." Comparative physiology has been for some decades unduly neglected by almost all the leading physiologists, who have concentrated their attention upon human physiology and have kept in view chiefly its relations to human pathology and medicine rather than the general problems of biology. Prof. Loeb's brilliant experimental researches in comparative physiology are therefore specially valuable at this time, because they are awakening a widespread interest in the more general problems. The most important papers of this collection deal with three topics: (1) the tropisms of animals, (2) heteromorphosis, (3) fertilisation of egg-cells. The papers of the last group report experiments in which Prof. Loeb succeeded in inducing development of the unfertilised eggs of sea-urchins and worms up to an advanced stage by means of chemical and physical treatment. The most interesting fact about these experiments is that their success seems to prove the reality of the author's insight into some of the chemical and physical conditions of growth, because it was achieved not merely empirically, but by the aid of theoretical considerations. The same is true, in much smaller degree, of the experiments of the second group. These consisted mainly of very simple manipulations by means of which the author succeeded in inducing worms and sea-anemones and other such creatures to develop new heads or mouths or tails in various unusual positions. The author is inclined to regard the constancy with which any such result follows the appropriate treatment as evidence of a long step made towards the mechanical explanation of life-phenomena and as a heavy blow to neovitalism. But to me at least the experiments seem to render any conception of the morphogenetic forces less, rather than more, possible. So long as each organ is believed to develop only in its appropriate relations with the rest of the organs of the body one can imagine a certain segregation of particles of like functions (call them gemmules or by any other of the many new names for this old conception) and reciprocal determinations of neighbouring groups. But if, as these experiments seem to indicate, every part is capable of developing any kind of structure and undertaking any kind of function if only subjected to the appropriate stimuli, these vaguely helpful conceptions must be rejected, and we stand more helpless than ever before the mysteries of growth,

differentiation and heredity. The conclusions drawn from the experiments on the tropisms of animals challenge criticism most loudly. The author tells us: "I have tried to find the agencies which determine unequivocally the direction of the motion of animals" and that "I consider a complete knowledge and control of these agencies the biological solution of the metaphysical problem of animal instinct and will". His experiments seem to prove that some lowly animals almost invariably move towards the principal source of light parallel to the direction of the strongest rays, more particularly of the visible rays of short wave length, while others have the opposite tendency (positive and negative heliotropisms); that others tend to mount against gravity (geotropism), and others to keep their bodies in contact with surfaces or edges of solid bodies (stereotropism). Two or more of these tendencies are combined in some creatures, and the author jumps to the conclusion that all the movements of these animals are unequivocally determined by the physical agencies that play upon them, that "by the help of these causes it is possible to control the 'voluntary' movements of a living animal just as securely and unequivocally as the engineer has been able to control the movements in inanimate nature. What has been taken for the effect of 'will' or 'instinct' is in reality the effect of light, of gravity, of friction, of chemical forces, etc."; that "however complicated they may be, the 'voluntary' movements of animals are nevertheless, . . . always unequivocally determined only by such circumstances as determine also the movements of bodies in inanimate nature". He regards not only "will" but also "instinct" as mystical conceptions. Yet if we regard an instinct as a congenital disposition of the nervous system which determines a certain mode of reaction to certain stimuli, the conception is purely material and might be thought acceptable to the crudest materialist. But Prof. Loeb is so blindly zealous to reduce the living organism to the plane of the billiard-ball that he grudges any credit to the structure of the organism. He should remember that even the billiard-ball only rolls because it is round, and that its path across the table is determined not wholly by the cue and the table but also by its own structure and properties, and that in a similar manner, even if we hold by psycho-physical materialism, we must regard the movements of animals as determined not unequivocally by the physical impressions made upon them, but as reactions upon those impressions, of which the form depends largely upon the structure of the animal and especially of its nervous system. The author asserts that he has proved the heliotropism of animals to be identical with that of plants, and concludes that, since plants have no eyes and nervous systems, therefore the eyes and the nervous system of the moth have nothing to do with its flying into the candle flame, and that this occurs merely because its protoplasm is positively heliotropic. The conclusion may possibly be true, but the reasoning is certainly false. By parity of reasoning men gather round the fire on a cold evening merely because their protoplasm is positively heliotropic. The author does well to deprecate some of the extremely anthropomorphic interpretations of the behaviour of lower animals, and if he contented himself with descriptions of observed effects he would be in a strong position; but he makes positive denials of the psychic life even more reckless than the assumptions in regard to it which he combats. Doubt is thrown upon even his more legitimate conclusions by some of his own observations, *e.g.* of nothing is he more positive than that movement toward the light is a direct unequivocally determined effect of the light on the protoplasm of animals, yet he himself describes an experiment (p. 54) in which a number of ants seemed to become

positively heliotropic only through imitation of others. His off-hand treatment of psychological questions is well-illustrated by the following passages,—“The worms lack *associative memory* and consequently also *consciousness*, which is only a function of the former. By associative memory we understand that arrangement of the brain by virtue of which a stimulus brings about not only the effects corresponding with its nature and the specific structure of the irritable tissue, but also the stimulating effects of *other causes*, which at a previous time once affected the organism at the same or almost the same time with the stimulus.” “Whether the sensations of pleasure and pain are possible without consciousness cannot be absolutely decided.”

W. McD.

*The Anatomy of Knowledge: an Essay in Objective Logic.* By CHARLES E. HOOPER. London: Watts & Co., 1906. Pp. 226. Price 3s. 6d.

The author of this book has no lack of self-confidence: ‘Knowledge being quasi-organic,’ he tells us in the preface, ‘the philosophic analysis of knowledge may be appropriately regarded as concerned with the *anatomy of knowledge*. I shall venture to trace a parallel between the philosophy of the past and the pre-natal state of the organism; also between the post-natal state and that of the philosophy to which all earnest thinkers aspire, and at the birth of which I have the ambition to assist’ (p. 14).

Whether the author’s philosophical equipment is equal to his ambition to excel in philosophical midwifery may well be doubted. The very analogy between the growth of knowledge and the growth of a human organism seems little better than a piece of ingenious trifling. To call the ‘least item of knowledge,’ *viz.* a thought in its relation to the object thought about, a knowledge-cell; to compare the sciences to the different organs of the body, and certain fundamental principles present in all sciences to the ‘vascular system of arteries and veins, and the nervous system, with its afferent and efferent branches,’ is but an idle ‘spielerei,’ throwing no light on the real nature of knowledge or on those fundamental problems with which the author attempts to deal.

The author’s own philosophical standpoint is not easy to indicate, because it does not seem altogether self-consistent. The following positions appear to be essential to what he calls ‘objective logic’: (1) The distinction between ‘object-matter,’ *i.e.* that *about* which we think, and ‘subject-matter,’ *i.e.* the thinking itself and the various ‘symbols’ (language, etc.) by which it is carried on. (2) Truth is the correspondence or ‘symbolic reference’ of this subject-matter to some real object-matter. (3) Real object-matter has a distinction of place, time, and kind from its corresponding subject-matter, and thus reality ‘transcends’ knowledge. If, on the other hand, the object-matter has *no* real distinction from the subject-matter, it is said to be *unreal*. (4) Object-matters may be concrete or abstract, singular or general (p. 33), but ‘the only object-matters of the known world which are truly objects or concrete entities are material bodies or parts or systems’ (p. 71). All else, *e.g.* consciousness, is merely an attribute or relation of material bodies. (5) If we inquire how we are to find out whether or no a given subject-matter corresponds to a real object-matter, we are told that ‘there is no law of thought, as such, by which the correspondence of subject-matter to object-matter can be established. . . . It is therefore in the relation of thought to the not purely intellectual elements of experience, and to the objective world inferred from those elements, that we must look for



a primary confirmation of the hypothesis that anything is real. *Apart from logical reference to experience which is not purely intellectual, the assertion of existence, or reality, is sheer dogma devoid of any possible verification* (p. 82). Further 'marks' of reality are singularity and concreteness (*ibid.*).

The obvious criticism on all this is, that it is the mere statement of the problem, not, as the author seems to think, its solution. Thus, to take merely the doctrine of the 'correspondence' or 'symbolic reference' of thought to the object, how can we ever *know* when this reference is 'true' or 'scientific'? In fact, the very distinction between thought and object is, surely, itself an act of thought, and contains within itself the same dualism, capable of being drawn out by yet another act of reflection, and so on in infinitum. Nor does it help us to fall back on the 'non-intellectual' element in experience. Apparently the author means sense-experience, but as he himself adopts the Lockian distinction between primary qualities which are 'objective' and secondary qualities which 'do not belong to objects, as such' (p. 107), and admits (p. 106) that our 'passing perceptions' *symbolise* objects no less than our 'reflective thoughts', it is hard to see how we touch reality here. In fact, the argument appears to involve a circle. For we are said to 'infer' the objective world from our non-intellectual experience, and inference undoubtedly involves thought. It appears then, that our sense-perception is symbolical of the objects which we infer from it, but in turn this inference, as involving thought, is *itself symbolical* of—what?

Incidentally the author deals with certain logical problems, but does not seem to be acquainted with the best modern thought on these subjects, unless he ignores such works as Mr. Bradley's and Prof. Bosanquet's purposely.

The second half of the book, containing an elaborate attempt at a classification and systematisation of the sciences, is in some ways most interesting. It certainly is exhaustive—to such a degree, that the author has had to invent quite a number of new names for sciences demanded by his scheme, but not yet existing, at least as independent sciences. Thus we hear of Peri-biology; Peri-anthropology; Ego-anthropology; Ethereology; Neo-history, etc. This whole attempt at classification, though it leads to some interesting remarks and side-lights in detail, yet is, like the analogy between knowledge and an animal organism, much of the nature of a clever intellectual 'spielerei' without much theoretical value. This applies more particularly to the elaborate diagrams (concentric circles with numberless sectors) by means of which the author tries to 'symbolise' the relations of the sciences. The attempt to label and pigeon-hole the efforts of the intellect in the apprehension of reality under its various aspects, must always be arbitrary and artificial, if only because it is bound to make the distinctions and boundary-lines far more definite than they really are.

In conclusion, the author promises another work on the 'tissues' or 'uniting principles' of knowledge, for he claims to possess 'certain genuine clues for exploring the anatomy of knowledge in these, its final, aspects' (p. 226). His present work does not incline one to look forward with much hopeful expectation to the fulfilment of that promise.

R. F. ALFRED HOENLÉ.

*Dictionary of Philosophy and Psychology.* Edited by JAMES MARK BALDWIN. Vol. iii., *Bibliography of Philosophy, Psychology, and Cognate Subjects.* Compiled by BENJAMIN RAND, Ph.D., Harvard University. Part I. Bibliographies, Dictionaries, etc.; History of Philosophy; Philosophers: their works, and works upon them—pp. xiv, 542. Part II. Systematic Philosophy; Logic; Aesthetics; Philosophy of Religion; Ethics; Psychology—pp. vi, 543-1192. New York and London: Macmillan, 1905.

This valuable dictionary is completed by the issue of the present volume which aims at furnishing, not an absolutely exhaustive, but a comprehensive bibliography of philosophy under the rubrics noted above. The importance of such a work certainly justifies the great amount of time which Dr. Rand has devoted to it during the last decade; and he is to be congratulated on terminating, on the whole successfully, what must have been a very laborious task. This copious bibliography substantially increases the value of Dr. Baldwin's dictionary, and Dr. Rand may rest assured that his work will certainly, as he modestly hopes, further research. It has a long career of usefulness in front of it; but perhaps its greatest service will be to stimulate the production of complementary works traversing the same ground more minutely and surveying it more systematically. For, although it is probably inevitable, and even just as well, that there should be one such work arranged throughout, like the present, alphabetically, such an arrangement has occasional serious disadvantages. It must be admitted that the research student requires more minute subdivision than the present work affords in some directions, while the exclusively alphabetical arrangement of the divisions given breaks up chronological order without furnishing him with any logical clues. Thus, suppose one desirous to work up the Philosophy of History turned to this volume: he would discover, probably to his surprise, that there is no section devoted to the subject, and we do not envy him the task of collecting his authorities from alphabetical lists under the heads noted above. Even more surprising is the absence of a section on Sociology, and one might even have expected another on Economics. The amount of material has, we are informed, been apportioned according to the relative importance of authors and subjects; but surely we are not to understand that the subjects just named are of no importance; or to infer from the proportion of pages that Psychology is twice as important as Ethics, three times as important as the Philosophy of Religion, or quite five times as important as Logic. No doubt the annual issues of the "Psychological Index" published by the *Psychological Review*—which since 1902, the date to which the lists given in this volume extend, has been and will continue to be published as its supplement—explains why we have an exhaustive bibliography in one direction, but it does not excuse the absence of any in others. Perhaps all the information is contained somewhere, but you certainly have to hunt for it. Where, for example, does one find Simmel's *Philosophie des Geldes*, or discover what Durkheim or Tarde may have to say on social questions? Then turning to authors: One could have wished that there had been a section "English philosophers: their works and works upon them". As it is English thought is only treated separately under "History of Philosophy," where it is dismissed in four columns; and although individual writers are treated of under "Philosophers: their works, etc.," it is not easy to see what raises a writer to the dignity of a section of his own. Why is there not one on Bradley as well as on Sidgwick? Why is there a lengthy

section on M. Fouillée while Ward only exists as *dissecta membra*? A feature of the work is the reference to important critical reviews by specialists, and the reference to periodical articles. The numerous references to *MIND* are given in a way that may prove misleading. The first volume of the New Series is numbered xvii., as consecutive to the sixteen volumes of the Old Series, disregarding, in a way that has very little to recommend it, our own method of numbering our volumes. Thus Dr. Bosanquet's article "Hedonism among Idealists," *N. S.*, xii., is given on page 899 as *MIND*, xxviii. A number of these references have been tested and found correct, but not all. Thus the late Prof. Ritchie's article, "The One and the Many," is given on page 629 as *MIND*, xxviii. This ought, of course, on the system adopted, to be xxiii., as Ritchie's article was published in 1898, Dr. Bosanquet's in 1903. In spite of such a slip, however, great care has evidently been taken during the enormous labour of compilation and verification.

DAVID MORRISON.

*Development and Divine Purpose.* By VERNON F. STORR. London: Methuen's, 1906. Pp. xi, 287.

This book forms the first-fruits of the newly endowed lectureship in the philosophy of religion founded at Cambridge by Dr. Stanton, and those who observed the great promise of Mr. Storr's work as a philosophy tutor at Oxford and regretted that reasons of health took him away all too soon, will be delighted to see that he has obtained so congenial an opportunity of expressing his ideas in the sister university. And Mr. Storr's book will be no disappointment. Although the lectures which compose it are intentionally popular in form, they contain a singularly lucid, candid, and in some respects very effective, discussion of a great question. This question, perhaps that of the greatest real importance in philosophy, is as to how far the progressive making of reality which we call 'Evolution' can be, or must be, interpreted theistically, as the continuous "self-revelation of a Personal God and the gradual unfolding of the spiritual meaning of the universe" (p. 286). Mr. Storr does not venture to affirm that this can as yet be demonstrated, but his discussion of the relations of evolution, teleology and theology, evincing as it does a firm grasp both of the scientific and of the philosophic considerations which are germane to the problem, is thoroughly up-to-date and will be found helpful even by those who do not share his philosophic standpoint. That standpoint is apparently best described as being that of a 'personal idealist' pure and simple, and rather disarms criticism by the modesty of its claims. For example Mr. Storr admits that the belief in teleology rests on a human attitude rather than on logical proof (p. 267), that the teleological argument cannot establish the existence of a Creator (p. 198), but produces only a general impression which constitutes "an almost irresistible appeal" to human intelligence (p. 128). On the other hand he is not beguiled into using bad arguments, a failing too common in apologetic literature, and he has perceived what Kant and his transcendentalist followers have curiously failed to see, *viz.*, that there is no escape from a naturalistic interpretation of existence, if Hume's criticism of the volitional conception of Causation is allowed to stand unchallenged (pp. 271-274). If Mr. Storr will only give his belief in the validity of the conception of power the backing it needs from a voluntaristic metaphysic, if he will extend his explanation that ultimate convictions are attitudes rather than arguments also to those of his naturalistic opponents, if he will conceive the Divine purpose as not intrinsically

inscrutable, but as capable of being gradually gathered from its empirical working out in history, he will find that he has no reason to be ashamed of his preference for the teleological reading of the hieroglyphs of the cosmic history, and that his method has at least this indefeasible advantage over any other that it alone renders the course of events fully conformable with that of the human mind, and so alone renders the cosmic story truly intelligible.

F. C. S. SCHILLER.

*Christianity and Sex Problems.* By HUGH NORTHCOTE, M.A. Philadelphia: Davis Co. (London: Medical Supply Association), 1906. Pp. 257. Price 8s.

The author is an Anglican clergyman who has spent many years in New Zealand. He writes throughout from the standpoint of a liberal and comprehensive Christianity, discussing in order all the sexual difficulties and problems which are most frequently encountered in life. While the author's position is thus frankly Christian he stands apart from those writers of popular manuals on these subjects who moralise and dogmatise on a very slender basis of knowledge. He is in touch with the most competent scientific authorities on sexual questions, and he always treats with due consideration the arguments that oppose the conclusions he himself accepts. These conclusions are not in every case the most usual or conventional conclusions, but they are generally well worked out and brought to the touchstone of experience, so that they deserve respect even when they cannot be accepted. The book will be chiefly valuable to clergymen and ministers, who are constantly called upon to give opinions and guidance on the matters here dealt with, but will also be found helpful and instructive by many others.

HAVELOCK ELLIS.

*The Meaning of Good: a Dialogue.* By G. LOWES DICKINSON. Third edition. London: Brinsley, Johnson & Ince, Limited. 1906. Pp. 224. Price 4s. 6d.

Readers of MIND will welcome this third edition of a book with which most of them will be familiar, but which has lost nothing of its freshness and suggestiveness since it was first reviewed in these pages (N. S., x., 413). Rather one may say that some of the characters in the book and their views have gained a fresh interest from their reappearance in a different setting in the author's latest book, *A Modern Symposium*.

*L'attention. Bibliothèque internat. de psych. expérimentale.* By W. B. PILLSBURY. 1906. Paris: Doin. Pp. 305.

It was a happy idea to devote a volume of this series to Attention. This is and will always remain one of the central facts and problems of Psychology. Its treatment, however, has been often very diffuse and not always very explicit. Prof. Pillsbury has gathered the material together and gives a very clear and systematic account. After a review of the psychical effects and the motor accompaniments of attention, its conditions are reduced to two classes—the objective, consisting in the intensity, the extension and the duration of the stimulus; and the subjective conditions, namely, the idea present to the mind and the mental attitude at the moment, the education, the social milieu and the heredity of the individual. The conception of interest furnishes nothing new and the feeling of activity is itself a group of sensations. A detailed review

brings the conclusion that attention plays the same part in controlling processes of proximately central origin as in controlling those of peripheral origin. The conditions of the formation of association and recall are, apart from the intensity and repeatedness of the sensations, practically identical with the subjective conditions of attention above mentioned. Two interesting chapters discuss the relation of attention to perception and memory. The treatment of the theories of apperception rests naturally on Leibnitz, Herbart, Wundt and Stout, and leads to the following conclusion: Every one admits that nothing beyond the limits of consciousness can serve as an explanation of the facts of consciousness, at least in psychology. But every one seems to feel also that the simplest explanation would be to assume that an external agent, called conation, apperception or will, determines mental states, rather than to imagine them determining themselves. This is evident from the constant fluctuation in the theories of the last three of the authors named. The only decision we can cling to has its fundament in the facts of consciousness themselves. All we can say is, that consciousness changes in certain ways and that the changes in the present stand in definite relations to those of the past and to the primitive states of consciousness. Leaving aside completely all that is not psychology, we shall resolve the difficulty perhaps by saying "apperception is a term which expresses the fact that every event in consciousness differs in some degree from what it would have been had the preceding history of the individual been different, all present circumstances remaining identical. Apperception would then be merely a general term expressing the conditions of attention, the relation between the observed facts." The same broad conclusion results from a discussion of the theories of attention, which are all found to be incomplete. "Attention is not one of these things, individually, it is all of them taken together and more still. We cannot consider feeling or the sensation of the moment as an explanation of the process of attention, even in its simplest form. To understand it we must look back to the impressions received at more distant periods of our life and to the dispositions with which man is endowed at birth." Anatomical, physiological and pathological theories lead on to the chapter of general conclusions which closes the volume.

Prof. Pillsbury has written a useful book. His conclusions, however, seem to me to be too broad to be useful, unless he is consistent and dismisses the problem as illusory. Attention can be influenced by past experience, heredity, the social *milieu* and the like, but it surely has as little itself to do with these things, as a theory of digestion as such requires a survey of all we have eaten and been. Unless the problem is illusory, there must be facts which a clear eye for the phenomenology of consciousness will see and a functional basis for these, which psychology can discover. Entirely subordinate to this chief relation are any theories which spring from the hypothesis of evolution.

H. J. WATT.

Kant's '*Privatmeinungen*' über das *Jenseits* und die *Kant-Ausgabe* der Königlich preussischen Akademie der Wissenschaften. Ein Protest von LUDWIG GOLDSCHMIDT. Gotha: E. F. Thienemann. 1905. Pp. 104. Price 2s. 6d.

This little book contains two essays which are essentially *polemical* in character, and will interest mainly those who have made a special study of Kant, and more particularly of the details of the text and the questions of interpretation arising out of them.

The author has made a name for himself in Germany by a number of books, pamphlets, and articles in philosophical periodicals, in which he appears in the rôle (somewhat rare in the annals of Kant-criticism) of an 'orthodox' Kantian, ready to defend the entire self-consistency of Kant's critical philosophy and to accept it as the final solution of philosophical problems. Hence he wages a vigorous and merciless war on the vagaries of current Kant-criticism, and attempts to show that the self-contradictions which successive generations of Kant-critics have professed to find in Kant's pages, as well as most of the textual alterations and emendations proposed by them, are mainly due to simple failure to understand Kant's meaning. It cannot be denied that in many instances Dr. Goldschmidt's attacks on the *Kant-philologen* seem well-deserved, and in any case, his whole-hearted defence of Kant is as refreshing as it is valuable. More especially he deserves the gratitude of every Kant-student for his reprint of G. A. S. Mellin's *Marginalien und Register zu Kant's Kritik der Erkenntnisvermögen*, first published in 1794-5 and praised by Kant himself, and for a facsimile reproduction of the first edition of the *Kritik der Reinen Vernunft*, original copies of which are nowadays very hard to obtain.

The first essay in the book under review deals with an apparently minute point of textual criticism, *viz.*, whether Kant meant to write '*keine Privat-meinungen*' or '*reine Privat-meinungen*' in the last sentence but one of the paragraph on the 'discipline of the pure reason in regard to hypotheses' (A. 781, B. 810). Most editors follow Hartenstein in adopting the latter reading, but Dr. Goldschmidt by an elaborate discussion of the Kantian distinction between knowledge and faith, scientific hypotheses and practical postulates, succeeds in showing that the reading '*keine*' is demanded by the context.

The second essay is a severe criticism of some of the textual emendations and corrections adopted into the new edition of Kant's works by the Prussian Academy of Sciences. Dr. Goldschmidt seems right, not only in showing that some of the readings adopted manifestly pervert the sense of Kant's argument, but also in his general criticism of the whole method of the 'critical apparatus' appended to the text of that edition, as serving merely to perpetuate the record of all the countless misinterpretations with which the path of Kant-criticism is strewn. If Dr. Goldschmidt's censures are justified, as they seem to be, the Academy-edition will not have made good its claim to be authoritative and final.

Whatever may be the merits of Dr. Goldschmidt's criticism in each individual case, there can be no doubt that he is one of the most thorough, earnest and sympathetic of Kant-students, whose views for this very reason demand attention and respect.

R. F. ALFRED HOERNLÉ.

*Saggi sulla Teoria della Conoscenza. Saggio Secondo: Filosofia della Metafisica.* Da COSMO GUASTELLA. Palermo, 1905. 2 vols. Pp. 762 + 1044.

Eight years ago I gave an account in this Review (MIND, vol. vii., N.S., p. 576) of Prof. Guastella's first essay on the theory of knowledge. The present work represents the same point of view, but displays wider knowledge and still higher powers of philosophical reasoning. To be sincere, in my opinion it places the author in the front rank not only of Italian but of European criticism as an expert in the history of philosophy.

Prof. Guastella is a positivist of the positivists, one who pushes positivism to its furthest logical consequences. Not merely does he resolve our knowledge of causation into the recognition of invariable phenomenal successions, but he maintains that no other causes can be known, for the good reason that no other causes exist or can be conceived. But, granting so much, the question presents itself, how to account for the claim of metaphysics to go behind appearances and to present a satisfying explanation of the realities which are supposed to underlie them. According to our author the answer is to be found in a tendency which leads the human mind to interpret what is unfamiliar by the analogy of what is familiar, combined with the idea that familiarity is itself an explanation, that when one event has always succeeded another in our daily experience we accept this constancy as a sufficient reason for its occurrence. It is to this law of mind that the notion of efficient causation owes its origin. An efficient cause is a cause explaining its effect, a something from our knowledge of which the effect could be deduced *a priori* and independently of experience. Agnostics from Locke to Spencer, while denying that we can have such knowledge still allow the actual or possible existence of agencies that would put us in possession of it were they within the range of our observation and reasoning. But the philosopher who has learned to interpret the notion of cause in terms of simple sequence ought to understand that behind sequences there is nothing the discovery of which would explain them. The supposed hidden causes, were they disclosed, would be merely so many additional facts of experience.

The earliest and most familiar of all experiences is the power of voluntary motion; and for no other reason than its familiarity this power is accepted as self-evident. Thus for primitive man will becomes the type on which all explanations of unfamiliar happenings are modelled. Hence arise the various anthropomorphic theories of nature, from savage animism up to the most elaborate metaphysical theologies, and not theologies only but also the atheistic hylozoisms which, like Clifford's theory of mind-stuff, assume that the universe would be more intelligible if it consisted of nothing but conscious elements.

Another experience, only less familiar than voluntary action, is that the bodies without us move under the stress of their mutual impacts and pressures; and that this should be so is also assumed as self-evident from its habitual occurrence. Accordingly all the thorough-going systems of materialism explain natural events as more or less complicated atomic shocks, without considering that for bodies to move each other after contact is in itself no more intelligible than that they should move one another at a distance.

So strong indeed is the primary instinct of assimilation that it overrides and reverses man's original animistic philosophy. The spirit or consciousness to whose initiative all motion was once ascribed is in course of time declared incapable of acting on matter at all, or of being acted on by it. Hence arise theories of automatism and parallelism which Prof. Guastella regards as based on a fundamental fallacy—the fallacy that an effect must be explicable by its cause. And he makes this same fallacy responsible for the various metaphysical systems in which nature is constructed *a priori*, or in which such a construction is set up as the supreme ideal of knowledge. Of these the most typical instances are to be found in what he calls dialectic realism, a method to whose exposure his whole second volume is devoted.

As is well known, Auguste Comte identifies metaphysics with the explanation of phenomena by realised abstractions; and he regards this method as a necessary stage in the evolution of thought. But this the



author considers a mistake. The tendency to realise abstractions by no means coincides with metaphysical philosophy as a whole; nor has positivism explained why this tendency should characterise the transition from theology to science. His own attempt to account for it forms the most original and ingenious part of the present work. As usual efficient causation supplies the master-key. Abstractions come to be mistaken for objective realities as a result of their being first confounded with working causes; and they are so confounded because the chains of demonstrative reasoning into which they enter are mistaken for actual chains of antecedents and consequents. Plato, the founder of Realism, always presents his objectified Ideas as linked together by a dialectic method of progressive differentiation and specification; and analogous systems of deduction have been attempted by his modern successors, Spinoza, Hegel, and Taine. None of these thinkers ascribes to his realised abstractions an existence apart from the phenomena which they inform; but for all they constitute the driving mechanism by which phenomena are produced and intelligibly connected. And it is just this conception of realised ideas as forming a living organic unity which distinguishes their philosophy from the Realism of the schoolmen whose ideas are, as the author happily puts it, mere fossils, the relics of a misunderstood Platonism.

Hegel's system is very slightly treated in the sections on Dialectic Realism, and Taine's views on the subject, having never been systematically developed, afford little scope for serious criticism. It is otherwise with Plato and Spinoza; and Prof. Guastella's interpretation of their idealism, whether quite successful or not, is certainly original, searching, and suggestive. It seems to me that the latest developments of Platonism are not here sufficiently taken into account, and that Plato's tendency more and more to substitute the activity of concrete mind for the dialectic linking together of Ideas as the key to physical phenomena rather goes against the theory that he ever regarded the Ideas as efficient causes. It also seems arbitrary to dismiss Plato's own destructive analysis of the One and the Many in the *Parmenides* as consciously artificial and sophistic because it stands in the way of the new view. And Spinoza's declared nominalism opposes itself as a serious obstacle to the realistic interpretation of his philosophy. But these are questions for Platonic and Spinozistic experts, to whose attention the second volume of this Essay is earnestly recommended.

Prof. Guastella looks on the notion that there are efficient causes, in the sense of causes which explain their effects, as an illusion not peculiar to an early stage of mental evolution, but as necessarily inherent in the mental mechanism at all times. I do not agree with him there. In my opinion both what we call primitive men and civilised men who are not metaphysicians have no other idea of causation than unconditional antecedence, experimentally verified as such. Their interest does not lie in understanding how things are produced, but in producing them, or in getting other people to produce them. For this purpose it is vitally important to distinguish between unconditional antecedents and more or less accidental concomitants; and so by the time that disinterested speculation begins the necessities of practical life have already made people sufficiently familiar with the mechanism of experimental elimination. Why is night not looked on as the cause of day? Because to produce artificial darkness, as by closing up a cave, does not, after any interval of time, result in a blaze of light, whereas a judicious use of the fire-drill or of flint and steel does. Why is lightning not mistaken for the cause of thunder? Because the production of light is not in practice followed by a crashing sound. The collision or the bursting of clouds suggests itself as an antecedent more in harmony with common experience.

As to what the author calls dialectic realism, this evidently originates in the fascination exercised on philosophers by the marvels of mathematical demonstration. Plato desiderated a science which should do for all nature what arithmetic and geometry did for the empirical rules of mensuration, and which should explain the facts postulated by arithmetic and geometry themselves. Spinoza was evidently inspired by the same ideal; and Hegel more remotely influenced by it through their example. This, if you will, was an abuse of assimilation, but an abuse not necessarily accompanying its use, and at any rate remote enough from the idea of efficient causation, which, as I have said, is no other than unconditional antecedence rightly understood. What the French, who are very liable to it, call *simplisme* is the last infirmity of noble thinkers, and an infirmity from which Prof. Guastella himself is not entirely free.

A. W. BENX.

*Che Cos' è il Bello ? Schema d'un Estetica Psicologica. Manfredi Porena.*  
Milano : Hoepli. Pp. xi, 483.

This book contains much that is suggestive, even for those who cannot approve the attempt to construct a purely psychological Æsthetic. It falls into two main divisions; the general theory of the beautiful, and the system of the arts.

The theory of the beautiful is subdivided into sections dealing with "the beauty of sense," with "expression," and with "inward beauty," by which I understand the beauty of content as such. Within "the beauty of sense" or "accessible to sense" (*il bello sensibile*) there are recognised immediate beauty and the beauty of relation, this latter including typical and final beauty. Within expression fall "expressive forms" and "expressive actions"—a distinctive correlative with that between immediate beauty and beauty of relation. And the treatment of inward beauty is divided in the same way into immediate inward beauty and the inward beauty of relation.

The system of the arts follows on the whole a type of classification familiar in recent continental æsthetic—the main division being taken between the "ideomimetic," i.e. the imitative or representative arts, including painting, sculpture and (dramatic) recitation; and on the other hand the "free" arts, architecture and music, the parallelism between which has dominated many æsthetic systems. A general treatment of the literary process from the point of view of representative perfection concludes the substantive part of the work. An appendix deals polemically with the theories of Benedetto Croce, with which the present writer is not acquainted.

It will be seen that the author's theory of beauty breaks up into three parts, each of which repeats within itself what is essentially the same distinction. It is with a certain intention, probably, that "expression" comes between "sensible beauty" and "beauty of content," between which it is a natural link. But as expressiveness or utterance has no special significance for the writer's doctrine, no true unity results from this collocation, and distinctions which might have stood for phases in a development appear to recur (as "beauty of relation" within "sensible beauty") within every phase. However, to pursue this point would perhaps be "*cadere nella metafisica*," which is the author's final word of censure.

The general definition of beauty is "that which pleases the mind or soul (*anima*)," and the point thus made in the distinction between the æsthetic and the non-æsthetic senses is interesting. The eye and ear, it is boldly maintained, feel in their proper activity no trace of *localised* pleasure,

such as that which attends on taste or smell. "Their enjoyment is physically unlocalisable; it is an enjoyment of the soul, a consent, an approbation accompanied by pleasure which the soul bestows on a quality of the object . . . a pleasure of the soul void of sensory tone" like that which accompanies the approval of goodness or intelligence. Can this sharp separation be maintained? In treating of expression the author insists that the lower senses can give rise to beauty of expression though not to the true beauty of sense (the scent of new-mown grass has expressive beauty, artificial perfumes have not beauty of sense; "in the former case the soul judges, in the latter, the nose"). There is truth in this; but when the lower senses are admitted to conjoin these distinct aspects of sense and soul, can the higher senses be restricted to one? Is there not in the greed of colour or brightness the same sensuous character which we know in the covetousness of the "lower" senses? The underlying question of principle is whether some deeper principle than the *de facto* character of the different senses would not have to be produced, if we are to account for the line between the pleasant and the beautiful of sense.

In the Beauty of Relation—which may be beauty of sense—there is always a demand or expectation or reference, a "*pretesa*," according to which we judge the presentation. In applying this view to typical beauty the author makes an ingenious suggestion for solving Burke's difficulty—if the normal of the species is the beautiful, how can beauty be novel or compatible with novelty? The author replies that while the abnormal is ugly, the common normal is only neutral and not beautiful. Beauty only appears in case of a coincidence with type which (the coincidence) is exceptional and not normal; the type here concerned being "a kind of ideal resultant in which the various components of the experience find their equilibrium; a form in which all the differences of too much and too little are eliminated". It is not, therefore, the common normal, or average. We should like to know more about this type, but there might be a danger *cadere nella metafisica*. The above is of course a gallant attempt to escape from the difficulty of accounting for beauty of relation on the basis of mere association. The author is anxious to maintain the pure subjectivity of beauty, and seems hardly to recognise that subjective genesis by association is compatible with any degree of objectivity of value, and that the latter is what we wish æsthetic to explain. The same reference to an exceptional case of a character commonplace in itself is employed to explain the beauty of imitative art (only exceptionally skilled or difficult imitation has artistic value) and the "beauty of judgment" in the account of literary process (the exceptionally true or profound judgment may be called beautiful); what we should call an inspired saying.

The book is well written, and full of acute remarks and apposite instances. But the writer's repugnance to an "objective beauty" (though he takes this merely to mean a beauty apart from perception) prevents him from unifying his views.

B. BOSANQUET.

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Received also:—

Alfred William Benn, *The History of English Rationalism in the Nineteenth Century*, London, Longmans, Green & Co., 1906, 2 vols., pp. xxviii, 450, and xii, 533.

Henry Sturt, *Idola Theatri, a Criticism of Oxford Thought and Thinkers from the Standpoint of Personal Idealism*, London, Macmillan, 1906, pp. xvii, 344.

- Arthur Sidgwick and Eleanor Mildred Sidgwick, *Henry Sidgwick, a Memoir*, London, Macmillan, 1906, pp. x, 633.
- Thomas Marshall, *Aristotle's Theory of Conduct*, London, T. Fisher Unwin, 1906, pp. 378, xxi.
- James Hervey Hyslop, *Problems of Philosophy or Principles of Epistemology and Metaphysics*, New York and London, Macmillan, 1905, pp. xiv, 647.
- Harold H. Joachim, *The Nature of Truth*, an Essay, Oxford, Clarendon Press, 1906, pp. 182.
- John I. Beare, *Greek Theories of Elementary Cognition from Alcmaeon to Aristotle*, Oxford, Clarendon Press, 1906, pp. vii, 354.
- William T. Nicholson, *Man, or Problems Ancient and Modern Relating to Man, with Guesses at Solutions*, London, Swan Sonnenschein & Co., 1906, pp. xix, 238.
- Harold Höffding, *The Philosophy of Religion*, translated from the German edition by B. E. Meyer, London, Macmillan, 1906, pp. viii, 410.
- Ralph Barton Perry, *The Approach to Philosophy*, London, Longmans, Green & Co., 1905, pp. xxiv, 448.
- Science in Public Affairs* (Essays by various writers), with Preface by Right Hon. R. B. Haldane, Edited by the Rev. J. E. Hand, London, George Allen, 1906, pp. xxiii, 291.
- The George Washington University Bulletin*, Catalogue Number, Washington, published by the University, 1906, pp. 317.
- A. Marie, *La Démence (Bib. Int. de Psy. Expérimentale, Normale et Pathologique)*, Paris, Octave Doin, 1906, pp. 492.
- L. William Stern, *Person und Sache, System der philosophischen Weltanschauung*, Erster Band, Ableitung und Grundlehre, Leipzig, J. A. Barth, 1906, pp. xiv, 434.
- Walter Frost, *Der Begriff der Urteilskraft bei Kant*, Halle, Max Niemeyer, 1906, pp. 136.
- Paul Barth, *Die Elemente der Erziehungs- und Unterrichtslehre auf Grund der Psychologie der Gegenwart*, Leipzig, Barth, 1906, pp. xi, 515.
- Ernst Cassirer, *Das Erkenntnisproblem in der Philosophie und Wissenschaft der neueren Zeit*, Erster Band, Berlin, Bruno Cassirer, 1906, pp. xiv, 608.
- Wilhelm Jerusalem, *Einleitung in die Philosophie*, 3te Auflage, Wien und Leipzig, Braumüller, 1906, pp. xvii, 249.
- Ludwig Stein, *Die Anfänge der menschlichen Kultur, Einführung in die Soziologie (Aus Natur und Geisteswelt, Sammlung wissenschaftlich-gemeinverständlicher Darstellungen)*, Leipzig, Teubner, 1906, pp. 146.
- Eberhard Zschimmer, *Eine Untersuchung über Raum, Zeit und Begriffe vom Standpunkte des Positivismus*, Leipzig, Engelmann, 1906, pp. 54.
- H. Oppenheim, *Psychotherapeutische Briefe*, Berlin, S. Karger, 1906, pp. 44.
- Joseph Segal, *Über die Wohlgefälligkeit einfacher räumlicher Formen (Inauguraldissertation-Zürich)*, Leipzig, Engelmann, 1906, pp. 77.
- Karl Bühler, *Studien über Henry Home (Inauguraldissertation-Strassburg)*, Bonn, Jos. Bach Wwe., 1905, pp. 85.
- Alessandro Bonacci, *La Derogabilità del Diritto Naturale nelle Scholastica*, Perugia, Vincenzo Bartelli, 1906, pp. 292.
- Giuseppe Fraccaroli, *Platone, Il Timeo (Il Pensiero Greco, vol. i.)*, Torino, Fr. Bocca, pp. xvi, 424.
- Federigo Enriques, *Problemi della Scienza*, Bologna, Nicola Zanichelli, 1906, pp. iv, 593.
- P. H. Ritter, *Schets eener critische Geschiedenis van het Substantiebegrip in de nieuwere Wijsbegeerte*, Leiden, E. J. Brill, 1906, pp. vii, 476.

## VIII.—PHILOSOPHICAL PERIODICALS.

**PHILOSOPHICAL REVIEW.** Vol. xv., No. 3. **A. Lalande.** 'Philosophy in France (1905).' [Discusses (1) the rationalistic and fideistic tendencies of French pragmatism; (2) the current movement towards a well-defined moral system of education; and (3) certain recent works in psychology and æsthetics.] **E. Albee.** 'The Significance of Methodological Principles.' [An examination of Kant's relation to rationalism seems to force us to the conclusion that 'regulative' principles can have no philosophical justification except in so far as they presuppose or correspond to the 'constitutive' principles of experience; yet these latter, in the nature of the case, can never be formulated. We escape the difficulty by realising that methodological principles are meaningless save in their functional relation to concrete experience. Knowledge and experience are thus progressively organised, on the implicit but inevitable assumption of the organic unity and immanent rationality of the world.] **E. C. Wilms.** 'The Relation of Schiller's Ethics to Kant.' [In his early work, Schiller sought to mediate between naturalism and spiritualism, now by an intermediate metaphysical agent, now by the forms of beauty. Contact with the critical philosophy deepened and clarified his thoughts; he is an independent critic of Kant, and gives fuller recognition to the desiderative side of man's nature.] **E. H. Hollands.** 'Schleiermacher's Development of Subjective Consciousness.' [It is the really original contribution of Schleiermacher to have pointed out the part which subjective convictions play in unifying and completing our experience. He thus appears, in his theory of subjective development, as supplementing rather than as opposing Hegel.] Discussion. **S. S. Colvin.** 'The Intention of the Noetic Psychosis.' [Transcendence means, not a going beyond experience, but the giving to it of a quality which in the moment of knowing removes its fleeting character, and assures it the permanence and reality which make it possible to be known.] Reviews of Books. Notices of New Books. Summaries of Articles. Notes.

**PSYCHOLOGICAL REVIEW.** Vol. xiii., No. 3. **J. M. Baldwin.** 'The Fechner Number.' **L. J. Martin.** 'An Experimental Study of Fechner's Principles of Æsthetics.' [An experimental examination of certain of the aesthetic principles laid down by Fechner in his *Vorschule*, without prejudice to the question whether or not the experiments really cover æsthetic ground, and without reference to any æsthetic theory on the part of the author. The longest study is devoted to the principle of the 'æsthetic limen,' with lines, differently curved and coloured, as materials: the relation of the æsthetic to the stimulus limen would seem to depend upon the method employed. Further chapters discuss the principles of persistence, summation, practice, etc.; of association; of contrast, sequence and comparison; and of the expression of pleasure and displeasure. The principle of association is widened by reference to chrom-

æsthesia and illusion. Those of contrast and sequence are probably invalid. That of expression merges in the modern principle of suggestion; further work upon this principle is promised. The paper is in many ways meritorious, especially upon the score of method. The observers were apparently all women, though this is not explicitly stated. The lack of a systematic standpoint, except as indicated by occasional remarks and quotations, gives the study an unfinished and preliminary appearance, which probably was intended by the writer: though this effect is needlessly heightened by careless composition and bad proof-reading.] Announcement.

AMERICAN JOURNAL OF PSYCHOLOGY. Vol. xvii., No. 2. **A. Borgquist.** 'Crying.' [A paper based upon questionnaire returns. Classification: crying among primitive peoples; influence of age; physical causes and symptoms, etc. The crying act: analysis and effects (circulation, bodily attitude, vocalisation, lump in throat, sob, tears, etc.). Theories and interpretation of data: the biology and psychology of crying. Bibliography.] **E. H. Hollands.** 'Wundt's Doctrine of Psychological Analysis and the Psychological Elements and Some Recent Criticism.—II. Feeling and Feeling-Analysis.' [The difference between feelings and sensations, as subjective and objective, is not epistemological, but psychological. Wundt gives an introspective definition of 'subjective,' the chief element in which is tendency to fusion as distinguished from permanent discreteness. The canon of analysis is the same for feelings as for sensations, though the methods are necessarily different. The simplicity of the feeling is determined, not by reference to the sensational substrate, but by experimental variation of this substrate considered as feeling-stimulus.] **E. Murray.** 'Peripheral and Central Factors in Memory Images of Visual Form and Colour.' [Neither the attributes of the stimulus (qualitative and spatial) nor the general eye-movements prompted by them constitute the essential factor in visual reproduction. Reappearance and persistence, distinctness and accuracy of reproduction depend primarily on the relation of stimulus or image to central conditions and upon certain special motor phenomena accompanying fixation.] **J. P. Porter.** 'Further Study of the English Sparrow and Other Birds.' [Experiments with vesper sparrow, cowbird, English sparrow and pigeon on learning maze (with memory experiments), opening catch of food-box (with memory experiments), distinction of designs, colours, etc. The English sparrow leads in capacity for fear, boldness, caution, and independent action. The cowbird is almost as wary, but less bold. The pigeon is timid, and has a keen sense of sight. Distraction of attention by the conditions of captivity shows least in the English sparrow.] **A. F. and I. C. Chamberlain.** 'Hypnagogic Images and Bi-Vision in Early Childhood: a Note.' **L. J. Martin.** 'The Electrical Supply in the New Psychological Laboratory at the Leland Stanford, Jr., University.' Psychological Literature. Book Notes.

INTERNATIONAL JOURNAL OF ETHICS. Vol. xvi., No. 2, January, 1906. **J. S. Mackenzie.** 'The Dangers of Democracy.' [Democracy means the self-government of a people; and this is the highest possible conception of government. Its one great danger is that, through misinterpretation in practice, it may fail to be true to itself and its own ideals, and become only the rule of the majority. The truest democracy is also the truest aristocracy—the state in which every one exercises rule in the things and in the measure in which he is fitted to do so.] **C. H. Toy.** 'Ethical Influences in University Life.' [The isolation of college life is

morally disadvantageous in its tendency to relax the sense of obligation, if not to indulge the feeling of antagonism, to general society. But the very detachment from multifarious interests makes it easier to take a larger view of life, and is so far favourable to the formation of ideals. The intellectual freedom and intercourse foster truthfulness and sympathy.]

**W. L. Cook.** 'Ten Years of War and the Hague Treaty.' [The next practical step in the development of the peace idea is that mediation be accepted as *obligatory* by the signatories of the Treaty.] **Mary E. Richmond.** 'The Retail Method in Reform.' ["The whole of social reform is in the retail method, when we follow faithfully wherever its careful working out may lead."] **C. F. Yonge.** 'Suicide: Some of Its Causes and Preventives.' **I. W. Howerth.** 'The Industrial Millennium.'

["The industrial millennium is a perfected industrial democracy. . . . Before it can come, in anything but form, the spirit of democracy must grow."] **R. C. Cabot.** 'Ethical Forces in the Practice of Medicine.'

**D. H. MacGregor.** 'The Practical Deductions of the Theory of Knowledge.' [An idealist theory of knowledge does not yield trustworthy teleological deductions.] **F. Arnold.** 'The So-Called Hedonist Paradox.'

[Argues that there is no paradox in the search for pleasure.] **C. S. Myers.** 'The Vivisection Problem: a Personal Explanation.' Book Reviews. Vol. xvi, No. 3, April, 1906. **J. Royce.** 'Race Questions and Prejudices.'

[In dealing with race-problems we are prone to confuse the accidental with the essential; to take as fundamentally characterising a race what is only a product of special conditions; and to regard as insuperable difficulties that are due to defective organisation. Race-problems are elemental social antipathies intensified, through suggestion and habit, into racial hatred and prejudice.] **J. MacCunn.** 'The Ethical Doctrine of Aristotle.'

[The moral end is realisable here and now in the action that best meets the concrete situation. Practical insight is the outcome, first, of the valuations which themselves imply both moral nurture and individual experience, and then of the settled habits that come from deliberate action. Truly moral conduct involves the organic union of character and intelligence, of predisposition and ever-new adjustment.] **J. G. James.** 'Revivals: their Ethical Significance.'

[Revivals are significant as the forward swing following on periods of decadence in morals, although steady and continuous progress would be preferable to these extremes. They are significant also as indicating that personality is the most potent force in human life and the highest category in ethics.] **M. Sturge Henderson.** 'Some Thoughts underlying Meredith's Poems.'

**Dickinson S. Miller.** 'Matthew Arnold on the "Powers" of Life.' [He enumerates the powers of conduct, of intellect and knowledge, of social life and manners, and of beauty. We may add those of bodily life and the senses, of the affections, and of religion. Rightly viewed, the power of conduct includes all.] **G. Spiller.** 'A Method of Dealing with the Labour Problem.'

[An account of Ernst Abbe and the regulations of the Karl Zeiss *Stiftung* in Jena.] Book Reviews.

REVUE NÉO-SCOLASTIQUE. Février, 1906. **G. Ysselmuiden.** 'Baconian Induction.' [Science inquires into the forms of simple natures, the 'nature' being the sensible quality, and the 'form' its innermost reality, as motion is the 'form' of heat.] **A. de Foulpique.** 'The Central Point of the Controversy of the Distinction of Essence and Existence.' [The point is this, that between actual existence and nothingness there is a mean, potentiality, which has a "reality distinct from actuality, irreducible to actuality, permanent under actuality".] **S.**



**Deploige.** 'The Conflict of Morals and Sociology.' [Points out the difficulty experienced by M. Durkheim in defining Sociology. Like a chemical body, a society has properties other than the sum total of the properties of its individual components.]

REVUE DE PHILOSOPHIE. 1<sup>er</sup> Avril, 1906. **G. Bertier.** 'Rational Beauty.' [That beauty consists in entirety and proportion of parts, and adaptation of the whole to the end, and is not, as Tolstoi says, *tout ce qui plaît*.] **F. Warrain.** 'The Triad of Reality.' [Reality is composed of three roots, which in isolation are inconceivable, unknowable, unintelligible, namely, as Wronsky enumerates them, being, knowing, and a neuter element which is the union of the two.] **J. Ingegnieros.** 'Physiology of Musical Language.' [That the centres specialised for musical language are true sub-centres to those of ordinary language, standing to them in the relation of part to whole.] 1<sup>er</sup> Mai, 1906. **W. James.** 'Pragmatism.' [Address to the University of California: a series of articles on Pragmatism is promised.] **Baron Charles Mourre.** 'The Duality of Self in Sentiment.' [There is in every sentiment an idea and an emotion: the idea consists in an opposition of self to self, the present self being compared with the past or future.] **F. Warrain.** 'M. Couturat's Principles of Mathematics.' [Logic and mathematics interpenetrate one another so intimately that they may be said to make one science, called General Logic, the science of all formally necessary reasoning.] **R. Meunier.** 'Vegetarianism, a Hygiene for a Philosopher.' 1<sup>er</sup> Juin, 1906. **E. Baudin.** 'The Philosophy of Faith in Newman,' analysis of H. Brémont's *Psychologie de la Foi*. [An appeal from formal reasoning to the illative sense: "for faith thus conceived reason is the enemy, or almost so".] **J. Gardair.** 'The Divine Being.' [Of the positive knowableness of God as the great Exemplar, on the principles of St. Thomas, in reply to Père Sertillanges, O.F., who speaks of "the superiority of night over day for declaring what God is".] **C. Mourre.** 'The Duality of the Ego in Emotion.' [That every emotion involves some glance at self.] **C. Dessoulavy.** 'A Finite God,' based on Mr. Schiller's 'Riddles of the Sphinx'. Altogether a good number.

REVUE PHILOSOPHIQUE DE LA FRANCE ET DE L'ÉTRANGER. 81<sup>e</sup> Année. No. 2, Février, 1906. **André Lalande.** 'Pragmatisme et Pragmaticisme.' [In this article, the recent philosophical movement generally called pragmatism is briefly characterised in its various forms: *i.e.*, the pragmatism of Peirce, the radical empiricism and broad pragmaticism of W. James, the humanism of F. C. S. Schiller, the *disirrigidimento* of theories and beliefs, as set forth by the writers of the review *Leonardo* in Florence, and the new interpretation and defence of religious dogmas presented, from the pragmatist's point of view, by some recent authors. According to M. Lalande the general problem implied in these various forms of the doctrine is the following: How to find something that shall control and judge the individual thought, and constitute it into truth? He believes that the *collective* action and thought are able to yield a criterion and to restore for the individual mind that authority of the impersonal reason whose weakening is the most striking feature of the present state of philosophy.] **Georges Palante.** 'L'Ironie: étude psychologique.' [Psychologically irony has its source in the "*Doppelygänger*," *i.e.*, in the dissociation of understanding or reason, and sensibility or intuition. Its metaphysical principle lies in the contradictions of our nature and also in the contradictions of the universe or of God. The ironist's attitude implies that there exists, in the heart of the things, from the point of view of our

reason, an element of fundamental and irremediable absurdity. Irony has the same principle as pessimism. In our days of social and moral dogmatism, irony constitutes a useful counterbalance, and should be welcomed by all the intelligences which strive to be disinterested.] **Dr. Rogues de Fursac.** 'De l'avarice : essai de psychologie morbide (fin).' [Studies especially the egoistic sentiments and the conduct of the miser in its relation to the external world, to the management of his estate, and to morality. The author's conclusion is that avarice tends towards the progressive restriction of the whole being, towards the decrease of the individual, the social and the family life, and is, on this account, profoundly immoral.] Notes et Documents. **Dr. J. L. B.** 'Sur l'inhibition exercée par la pensée sur la tonicité et les réflexes musculaires.' Analyses et comptes rendus. *Revue des Périodiques étrangers.* No. 3, Mars, 1906. **Fr. Paulhan.** 'Le Mensonge du Monde.' [Existence is subjected to two universal laws : the law of systematisation and the law of evanescence : by this latter word is denoted the disappearance of a system which, through its own improvement and completion, has rendered itself useless. Contradiction lies in the very heart of things. Existence supposes both systematisation and opposition. Lie being a systematisation which covers and conceals a disharmony, it appears to be representative of the general life of the world, not only of that of the societies and the individuals, but also of the physical and chemical systems, of the molecules and atoms. The profoundest and most general characteristic of the world may thus be summed up in this phrase : the universal lie. These ideas and some of their consequences are in the paper presented in an almost schematic form, but the author's purpose is to develop and justify them in a series of books.] **F. Pillon.** 'Sur la philosophie de Renouvier.' [A critical account of a recent book of M. G. Séailles on this subject. While holding fast to the fundamental principles of the neo-criticism, M. Pillon admits some of M. Séailles's objections, and indicates what modifications should be introduced into Renouvier's doctrine in order to give it a perfect logical coherence.] **Ch. Ribery.** 'Le Caractère et le Tempérament.' [In determining and classifying the temperaments, we must start from the consideration of the nervous system ; this method is the only one which is in conformity with the data of present science. But we have been till now in the *heroic* period of the science of character ; we have studied it in a literary, rather than in a scientific, way, and we should now limit ourselves to more positive inquiries.] Notes et Documents. **Vte. Brenier de Montmorand.** 'Hystérie et Mysticisme : le cas de Sainte Thérèse.' [Shows, by a careful examination of the arguments afforded on both sides, that it remains doubtful whether Sainte Thérèse were hysteric or not. M. de Montmorand's opinion is that the same doubt is to be had about most of the other orthodox mystics.] *Revue Critique.* **J. Segond.** 'Le moralisme de Kant et l'Amoralisme contemporain.' [The recent work of M. Fouillée on this topic is analysed, and his refutation of both the metempirical moralism (except in so far as Fouillée's criticism concerns some of the neo-criticist theories) and the Nietzschean amoralism is approved as fundamentally sound.] Analyses et comptes rendus. *Revue des Périodiques étrangers.* With the March number is issued in a special number of 156 pages the third list of contents of the *Revue Philosophique* (from 1896 to 1905). No. 4, Avril, 1906. **G. Compayré.** 'La Psychologie de l'Adolescence.' [A critical notice of the recent book of G. Stanley Hall on *Adolescence*. The work is a powerful and suggestive one, unparalleled for the richness of information, and it prepares the way to new inquiries on a most fruitful and important subject ; but the critic,

does not agree with M. Stanley Hall about the genetic psychology sketched by him and the scientific and practical value he claims for it.] **G. Belot.** 'Esquisse d'une morale positive.' [States briefly the main conclusions of a book which will be published shortly. Life in society is the common condition of all human activities and ends, whatever they may be. Society is the supreme end because it is the universal mean. Consequently the general formula of practical morality is "Faire exister la société," and in most cases the particular problems of ethics consist in harmonising needs, interests, or institutions already existing. Founded on this principle, ethics would be at once rational and positive, and appears to be essentially suited to a democracy, not only as originating from it, but principally as preparing its very completion: for it organises the functions of the individual and forms the person by the self-same work by which it orders society, and it tends to realise the unity and life of the social whole, not through the enslavement but through the freedom of the individuals.] **P. Gaultier.** 'Le Rôle Social de l'Art.' [Art is social in itself simply because there is no æsthetic emotion, in the heart of its admirers and of the artist, without living sympathy, intimate communion and reciprocal penetration. Every work of art is social in its effects because it is social in its principle, and the more beautiful it is, the more social it is: nothing is more social than a masterpiece inasmuch as there is nothing that arises out of a more profound and more universal love. But neither a moralising purpose nor an explicitly social end is to be assigned to art. It is social and moral without intending to be so, merely in striving to fulfil its specific function, which is, first of all, to manifest and to evoke in others the æsthetic emotion.] Notes et Documents. **G. H. Luquet.** 'Note sur un cas d'association des idées.' Analyses et comptes rendus. Revue des Périodiques étrangers.

REVUE DE MÉTAPHYSIQUE ET DE MORALE. 14<sup>e</sup> Année, No. 2, March, 1906. **J. Lachelier.** 'La proposition et le syllogisme.' [Logicians ought to distinguish between propositions of inherence and propositions of relation. The latter constitute syllogisms fundamentally different from those of the Aristotelian logic. Lachelier proceeds to criticise the traditional analysis and classification of the propositions and syllogisms of inherence.] **G. Belot.** 'En quête d'une morale positive.' [The concluding article of this series, continued from the issue of September last.] **Mario Pieri.** 'Sur la compatibilité des axiomes de l'arithmétique.' [A study in the new philosophy of mathematics.] **L. Couturat.** 'Pour la Logistique.' [A lengthy and detailed reply to Poincaré's criticisms of the positions taken up by Russell and Couturat.] **C. Bouglé.** 'Note sur les origines chrétiennes du solidarisme.' ['Solidarisme' is not of Christian origin. The modern attempt to reorganise society on scientific and rational principles is due to recognition of the insufficiency of the subjective feelings of love and charity as a basis for the duties of active benevolence.] Livres nouveaux, etc.

ZEITSCHRIFT FÜR PSYCHOLOGIE UND PHYSIOLOGIE DER SINNESORGANE. Bd. xli., Heft 2 und 3. **G. Heymans.** 'Untersuchungen über psychische Hemmung.—iv. Schluss.' [The visual experiments show that suppression and intensive contrast may be subsumed under inhibition. The author appends some theoretical conclusions as to the distribution of mental energy.] **K. Goldstein.** 'Merkfähigkeit, Gedächtnis und Assoziation: ein Beitrag zur Psychologie des Gedächtnisses auf Grund von Untersuchungen Schwachsinniger.—ii.' [Experiments on memory.

We must distinguish between memory proper and power of observation (*Merkfähigkeit*). Both rest upon impression (*Einprägung*) and power of associative observation; memory depends more upon the former. Imbecility is characterised by impressionableness, with lack of power of associative observation; acquired feeble-mindedness shows a fair activity of association, with defective impressionableness. The main defect of congenital feeble-mindedness lies in defect of apperceptive disposition (*Anlage*.) **M. Foth.** 'Wie rahmen wir unsere Bilder ein?' [Negatively, the frame rules out from the picture the distracting impressions that surround it; positively, it should further the associations upon which æsthetic illusion depends. Hence the colour of the frame should be chosen to correspond, as far as possible, with the natural surroundings of the scene or object shown in the picture.] **R. Hohenemser.** 'Die Quarte als Zusammenklang.' [By its vibration-ratio of 3:4 the fourth is the first chord whose natural base or fundamental lies not in the lower but in the higher of the component tones. At the same time, the lower tone, as lower, presents itself as base or fundamental. It is the conflict thus arising which gives the fourth its peculiar harmonic character.] *Literaturbericht.* **W. Muench, J. Trueper, W. Ament.** 'Kongress für Kinderforschung und Jugendfürsorge.' Bd. xli, Heft 4. **D. Katz.** 'Ein Beitrag zur Kenntnis der Kinderzeichnungen.' [The child draws, not what he sees, but what he knows to be present in the object or picture. This fact raises the question of the injection of meaning into sense complexes. The author offers an explanation in terms partly of vision itself (symmetrical position of the eyes; maximal clearness of apprehension), partly of the co-operation of sight and touch.] **E. Jaensch.** 'Ueber die Beziehungen von Zeitschätzung und Bewegungsempfindung.' [We have apparently direct sense criteria only for the rate of movements, not for their length. Associative processes give us our bearings as regards position and attitude of the limbs. If now we are asked to execute two movements of the same length from different starting-points, neither of these criteria, the direct or the indirect, are adequate. We therefore have recourse to another set of associations, and estimate in terms of time.] **E. Jaensch.** 'Ueber Täuschungen des Tastsinns: im Hinblick auf die geometrisch-optischen Täuschungen.' [First part of an experimental report on cutaneous illusions of filled and empty space.] *Literaturbericht.*

ARCHIV FÜR DIE GESAMTE PSYCHOLOGIE. Bd. vi., Heft 4. **A. Kirschmann.** 'Normale und anomale Farbensysteme.' [(1) The use of the direct must be supplemented by that of the inverted spectrum. Both show mixtures of wave-lengths; and the quality of visual sensation depends upon the absence rather than upon the presence of a certain group. (2) Colour systems must be achromatic, dichromatic or polychromatic; the 'component' theories are artificial constructions. (3) The invariable colours of indirect vision are no proof of a component theory; on the contrary, they are necessary consequences of the changes undergone by a polychromatic system with change of retinal position (change in the form of the base of the double cone).] **A. Lehmann.** 'Beiträge zur Psychodynamik der Gewichtsempfindungen.' [Raises the questions whether facilitation (*Bahnung*) is the cause of the Fechnerian negative time error, of anomalous differences and of typical tendencies, and whether the positive time error may be explained by the conditions of experimentation. The experiments were made in Fechner's way, mainly by the method of limits, with a control by the method of constant differences. The law of facilitation is confirmed; the positive time error

results from the co-operation of facilitation and predisposition (*Einstellung*). Incidentally, the writer is able to show the influence of the separate factors in the weight-complex: movement (articular) sensation, pressure, and strain sensation. Issue is taken with Mueller on various points, as, *e.g.*, on the effect of fatigue in determining the negative time error, and on the part played by judgment of absolute impression. The paper ends with methodological suggestions.] **P. Stern.** 'Berichtigung.' [Reply to Duerr.] Referate: Einzelbesprechungen.

**KANT-STUDIEN.** Bd. x., Heft 4 and 5, November, 1905. **G. Gerland.** 'Immanuel Kant, seine geographischen und anthropologischen Arbeiten.' [The concluding article of this series. In it Gerland expounds and gives a very destructive criticism of Kant's *Natural History of the Heavens*. It is quite wrong to speak of a Kant-Laplace hypothesis, or to describe Kant as the founder of modern cosmology. Kant's treatise is, in its main tenets, inspired by Wright's earlier work; and, owing to its inherent defects, necessarily remained without important influence. Its value and significance are chiefly personal and philosophical. Gerland concludes by consideration of Kant's later geographical and anthropological treatises.] **M. Runze.** 'Karl Rosenkranz' Verdienste um die Kant-Forschung.' [A brief account of Rosenkranz' various writings upon Kant and of his edition of Kant's works.] Recensionen, etc. Bd. xi., Heft 1, February, 1906. **G. Huber.** 'Graf von Benzel-Sternan und seine "Dichterischen Versuche über Gegenstände der kritischen Philosophie".' [These verses inspired by the various fundamental doctrines of the Kantian system are here printed *in extenso*. They were first published in 1794.] **M. Rubinstein.** 'Die logischen Grundlagen des Hegelschen Systems und das Ende der Geschichte.' [By an examination of the logical principles of the Hegelian philosophy Rubinstein leads up to the conclusion that Hegel owing to his absolute standpoint fails to account either for history, for the moral consciousness, or for known personality.] **F. Behrend.** 'Der Begriff des reinen Willens bei Kant.' [An attempt to define what Kant, throughout his philosophy, means by the term 'rein,' as applied to thought and to the will.] **W. Lütgert.** 'Hamann und Kant.' [A review of recent works on Hamann. Lütgert collects the main facts which they bring to light regarding Kant's connexion with Hamann.] Recensionen, etc.

**ZEITSCHRIFT FÜR ÄSTHETIK UND ALLGEMEINE KUNSTWISSENSCHAFT,** herausgegeben von MAX DESOIR. Stuttgart, Ferdinand Enke, 1906. Bd. i., Heft 1, M. 5. This is the first appearance of a periodical which aims at being the special literary organ of those who are scientifically active about questions of aesthetics, of whom there are a goodly number in Germany, and, one would hope, an increasing number in English-speaking countries. The present part contains ten sheets, and we are promised four parts *per annum*, of eight to ten sheets each, to constitute a volume. The Prospectus promises very good things, and, if the publication maintains the standard it has set itself in its first number, it is not likely to complain of want of support, and may look forward to the prosperous career which we heartily wish it. The number contains the following articles: **Theodor Lipps.** 'Zur "ästhetischen Mechanik".' [Shows how certain simple lines proceed freely, or with innate necessity, from certain forces, tendencies, activities, etc. The æsthetic impression produced by these lines is due to the synthesis of the feeling of these forces, etc., and this or that line is to be employed only where the thought of such forces, etc., has meaning.] **Konrad Lange.** 'Die ästhetische

'Illusion im 18 Jahrhundert.' [The author shows by reference to the views of Goethe, Schiller, Moses Mendelssohn, etc., that his *Illusionsästhetik* is only a continuation of classical Aesthetics which had been misunderstood by Lessing.] **Hugo Riemann.** 'Die Ausdruckskraft musikalischer Motive.' [A very interesting article dealing with the simplest elements, which are taken up into the greatest musical forms.] **Georg Simmel.** 'Über die dritte Dimension in der Kunst.' [The third dimension not an inseparable accident of the painter's art—the Japanese do without it. The third dimension not being optically visible the conveyance of the suggestion of tactile values into a work of art enriches and strengthens it.] **Hugo Spitzer.** 'Apollinische und dionysische Kunst.' [These correspond to the division between *affektfreie und mit Affekterregung einhergehenden Kunstwirkungen*. This first instalment of the article is occupied with a discussion of the definition of "Affekt".] **Theodor Poppe.** 'Von Form und Formung in der Dichtkunst.' [The æsthetic form has no material existence, only certain material presuppositions. The technical form being the concept of those conditions which assure the material existence of a work of art. Endeavours to illustrate the process of poetical production, and discusses the medium in which the poet works.] *Besprechungen. Schriftenverzeichnis für 1905. Erste Hälfte.* [This is carefully classified.]

ARCHIV FÜR SYSTEMATISCHE PHILOSOPHIE. Neue Folge, Bd. xii., Heft 1, 25th February, 1906. **Kurt Geissler.** 'Über Begriffe, Definitionen und mathematische Phantasie.' [The first instalment of an important article investigating the meaning of Definition and its relation to concepts and to fundamental facts or presentations. Seeks definitions of a point, a straight line, a parallel, an angle, opposing Hilbert and Frege's view of Definition.] **B. Lemcke.** 'De Voluntate. Metaphysische Axiome einer Empfindungslehre.' [Seeks to demonstrate an *a priori* knowledge of the will, and to exhibit the analogy between the axioms of Will and movement. Will is, in fact, movement known in a special, one-sided way; and its laws must be derived from the laws of motion—as the better known—not conversely as Schopenhauer imagined.] **Prof. Dr. Hoffmann.** 'Exakte Darstellung aller Urteile und Schlüsse' (*Nachtrag*). **Richard Skala.** 'Bei welchen Tatsachen findet die wissenschaftliche Begründung der Erscheinungen ihre Grenzen?' [Inadequacy of the materialistic explanation of feelings, desires, etc. Plea for their interpretation from within.] **Bernhard Wities.** 'Humes Theorie der Leichtgläubigkeit der Menschen und Kritik dieser Theorie, nebst Versuch einer eigenen Erklärung.' [Rejects Hume's explanation of credulity and traces the latter back to the child's identification of the meaning of a word with the reality of its content. It only slowly learns to separate presentation and object as reflexion develops, and in the credulous thought is still in a rudimentary condition.] **Ernst Schwarz.** 'Über Phantasiegefühle' (Schluss). [Concludes a very interesting article. The *Phantasiegefühle* undoubtedly real emotions intermediate between presentations and serious feelings.] **Lorenz Pohorilles.** 'Die Metaphysik des xx. Jahrhunderts als induktive Wissenschaft.' [Metaphysics if identical with epistemology has no future. Metaphysics upon an inductive basis is, however, assured of its position as a science for ever, and Dr. J. Sinnreich has prepared the way for Metaphysics as an inductive science by his *Transcendentaler Realismus oder Korrelativismus unserer Tage*.] **James Lindsay.** 'Two Forms of Monism.' [Scientific Monism v. Spiritualistic Monism.] **David Koigen.** 'Jahresbericht über die Literatur zur Metaphysik.'

VIERTELJAHRSSCHRIFT FÜR WISSENSCHAFTLICHE PHILOSOPHIE UND SOZIOLOGIE. Jahrgang xxx. (Neue Folge, v.) Heft 1, 30th March, 1906. **Siegfried Kraus.** 'Ein Beitrag zur Erkenntnis der sozialwissenschaftlichen Bedeutung des Bedürfnisses.' [Partly critical, partly constructive. Rejects the materialistic conception of History, and shows that the human individual, as the subject of desires and feelings, is purely determined by himself in his positing or his being, and that only his now-being or so-being, the concrete forming of his desires, appears determined by the rest of the world, his *milieu*. Discussion of the problem of the system of needs.] **Richard von Schubert-Soldern.** 'Über die Bedeutung des erkenntnistheoretischen Solipsismus und über den Begriff der Induktion.' [Epistemological Solipsism does not assert that I alone exist in the world, or that I am the world, but only that all knowledge is locked up in the "Ich Zusammenhang"; that I cannot attain to a knowledge lying outside the widest stretch of my consciousness. Discussion of the relation of the causal connexion to the solipsistic and the methodological value of the latter. The importance of the epistemological analysis (on the basis of the solipsistic connexion) for the theoretical and practical sphere. Discussion of induction.] **H. Reybekiel Schapiro.** 'Die introspektive Methode in der modernen Psychologie.' [Interesting review with criticisms of the views of Brentano, Comte, Erdmann, Rehmke, Volkelt, Horwicz, Exner and Wundt.] Besprechungen, Philosophische Zeitschriften, Bibliographie, etc.

ZEITSCHRIFT FÜR PHILOSOPHIE UND PHILOSOPHISCHE KRITIK. Bd. cxxvii., Heft 1. **H. Siebeck.** 'Über musikalische Einfühlung.' [The result of 'Einfühlung,' according to Siebeck, is the conversion of an outward object into a subjective emotional experience. Now the peculiarity of music is that it gives this experience more directly than is possible with the plastic arts, for example, 'We do not begin by perceiving the object that excites the feeling in us, but we have, so to speak, an auditory intuition of the feeling itself. And it is the sum of the feelings so excited that produces the (æsthetic) mood in ourselves' (p. 12). Among other peculiarities unmusical lovers of art prefer their æsthetic enjoyments to be the reward of a certain effort.] **Karl Andresen.** 'Zur Begründung des Theismus.' [E. von Hartmann is right when he postulates the existence of an irrational principle at the bottom of the world, wrong when he places that principle inside instead of outside God. Let him see his error and he will develop into a good theist.] **W. Pailler.** 'Das Raumproblem.' [An attempt to prove that non-Euclidean geometry is based on the tacit assumption of Euclidean principles.] **Chr. D. Pflaum.** 'Bericht über die italienische philosophische Literatur der Jahre 1903 und 1904.' Recensionen, etc. Heft 2. **G. Noth.** 'Die Willensfreiheit.' [The writer supports freewill, chiefly basing his argument on our ability to strengthen certain motives by concentrating the attention on them.] **Ludwig Goldschmidt.** 'Beiträge zur kr. d. r. Vernunft.' [An adverse criticism of sundry emendations of Kant's text, which, according to the writer, merely prove that those who propose them do not understand Kant's philosophy.] **H. Th. Lindemann.** 'H. Taine's Philosophie der Kunst.' [The writer, who is an adherent of Benedetto Croce, treats Taine's æsthetic theory as a worthless survival of the metaphysical method, and more particularly of Hegel's intellectualism.] **E. Dutoit.** 'Bericht über die Erscheinungen der französischen philosophischen Literatur im Jahre 1902.' **A. Vierkandt.** 'Ein Einbruch der Naturwissenschaften in die Geisteswissenschaften?' [A protest against the attempt of some recent writers to use



the biological theory of selection as a key to social problems.] **W. Failler.** 'Das Raumproblem.' [Attempts to prove Euclid's axiom of parallels by projective geometry.] Recensionen, etc.

RIVISTA FILOSOFICA. Anno vii., vol. viii., Fasc. v., November-December, 1905. **A. Varisco.** 'La finalità della vita.' [Taking his text from Reinke's *Philosophie der Botanik*, the writer argues, against Reinke, that although the apparent purposiveness of living organisms cannot be explained away as a subjective illusion, we are not brought any nearer to an explanation of its causes by phrases about 'determinants,' etc., which merely repeat the fact to be explained under an abstract form. Modern thought discountenances the hypothesis of a personal designing Creator; while to talk about 'immanent ideas,' or a 'universal subject underlying reality,' neither of which is conscious, amounts to no more than repeating that the organism is so constructed as to maintain and reproduce itself.]

**A. Pagano.** 'La Sociologia e l'insegnamento secondario e superiore.' [A plea for literary as distinguished from scientific education, and within literature for greater attention to the history of civilisation as distinguished from philology.] **A. Franzoni.** 'Sul Nietzsche.' [A summary of some recent German and French criticisms on Nietzsche.]

Rassegna Bibliografica, etc. Anno viii., vol. ix., Fasc. i., January-February, 1906. **C. Cantoni.** 'Sull' Idealismo Critico. Saggio di una difesa del sapere volgare.' [Common sense is justified by the highest philosophy in maintaining the existence of a reality distinct from thought. But an unthinkable reality would be self-contradictory; nor can thought be conceived as a product of its own object. Moreover, there is a knowledge transcending experience, due to the spontaneity of mind, as even Locke admitted.] **B. Varisco.** 'Fisica e Filosofia.' [Agreement is much harder of attainment in philosophy than in physical science, because there the power of convictions based on unreasoned experience is much greater. But even in philosophy ultimate agreement is not beyond all hope.]

**G. Vailati.** 'La teoria del definire e del classificare in Platone e i rapporti di essa colla teoria delle idee.' [Plato's ideas have some analogy with the law of universal causation as employed by modern science.] **A. Pagano.** 'La Sociologia e l'insegnamento secondario e superiore (continuaz. e fine).'

[An able plea for making a good working knowledge of how government is carried on part of a liberal education.]

**A. Faggi.** 'A proposito di una Teoria Epicurea.' Rassegna Bibliografica, etc. Fasc. ii., March-April, **G. Calò.** 'L'Etica di Giorgio T. Ladd.'

[The merit of the American philosopher is to have seen that moral consciousness implies the unity of all the functions constituting personality; his mistake is not to have seen that in the feeling of ethical approbation, and hence of obligation we have as it were a resonance of the whole personality in the exercise of its fundamental functions.]

**G. Chiabrá.** 'La psicologia Matematica dell' Herbart e la psicofisica moderna.' [Chiefly an attack on the idea that mental phenomena can be effectively studied by quantitative methods.] **G. Bonfiglioli.** 'La gnoseologia di Tertulliano nei suoi rapporti colla filosofia antica.'

[Tertullian follows the Stoics in deriving all knowledge from the senses.] **A. Ferro.** 'Meccanismo e Teleologia.'

[A plea for the reality of final causes based on the usual arguments in their favour.] **O. Zanotti Bianco.** 'Schopenhauer e la gravitazione universale.' [Interesting as showing that an Italian scholar can still be found who believes in the forged letters of Pascal published by Michel Chasles (p. 261).] Rassegna Bibliografica, etc.

## IX.—NOTES.

### ROYAL DANISH ACADEMY OF SCIENCES AND LETTERS.

THE Royal Danish Academy of Sciences and Letters offers to competition the Gold Medal of the Academy for the best reply to the following question :—

*Examine the relation between Criticism and Pragmatism from the point of view of the theory of knowledge and from the psychological point of view.*

By Criticism is meant the views of those philosophers who attach themselves more or less closely to the principles laid down by Kant : by Pragmatism that treatment of the problem of knowledge which seeks to show that the real development of knowledge, the conditions which it supposes, and the process which it follows must be determined by the exigencies to be met and the ends to be attained.

The reply to this question may be written in Danish, Swedish, English, German, French, or Latin. The articles, *not* bearing the name of the author but a motto, must be accompanied by a sealed envelope having the same motto and enclosing the name, profession and address of the author. The replies to be sent before 31st October, 1907, to the Secretary of the Academy, M. H.-G. Zeuthen, Professor, The University, Copenhagen. The name of the laureate will be published in the month of February following, after which the authors may withdraw their memoirs.